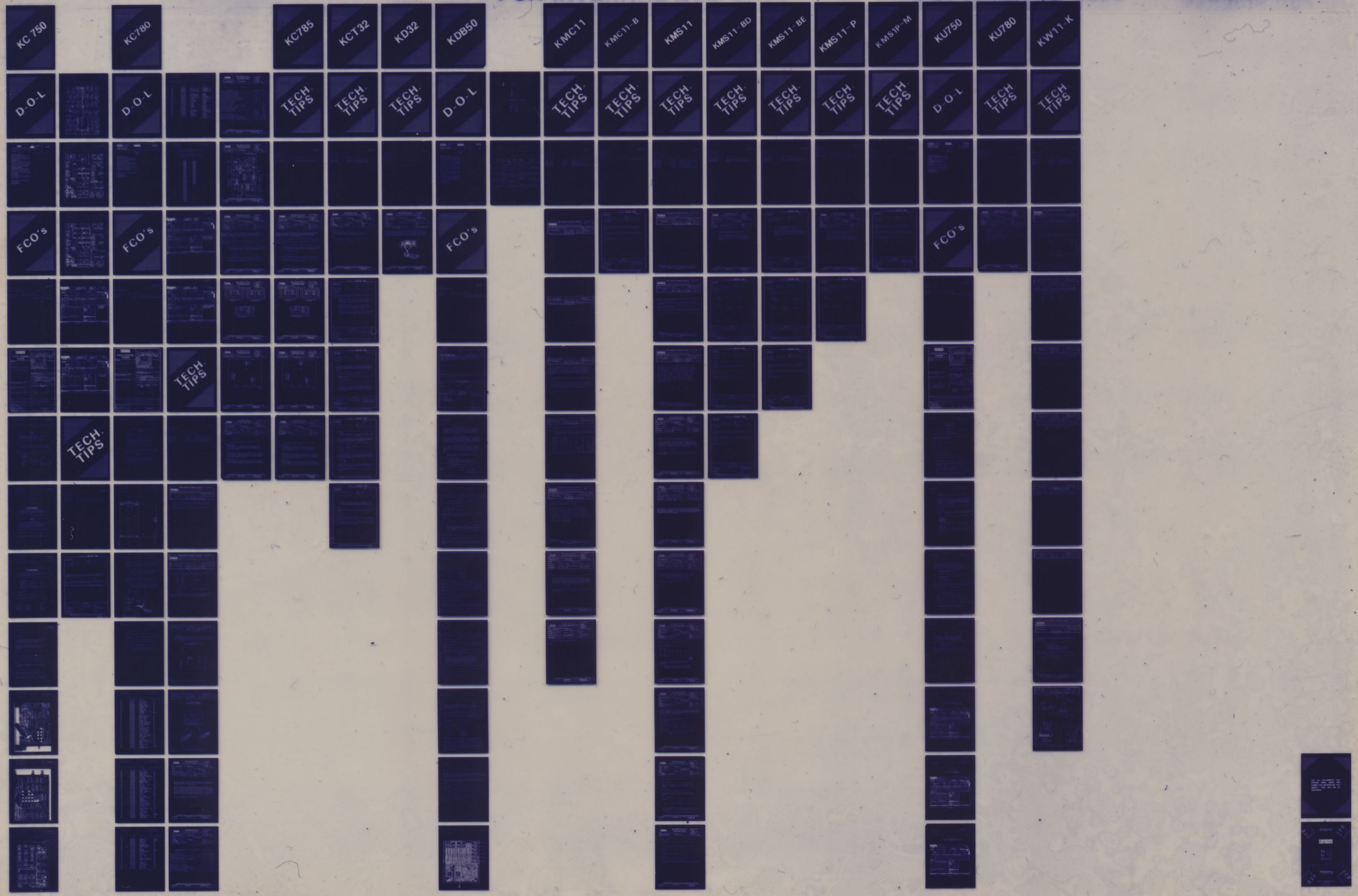
KC750 TO KW11-K

TECHNICAL INFORMATION

FOR INTERNAL USE ONLY

EP-KC750-TI-AE
1 OF 1 APR 1988
COPYRIGHT© 1988

MADE IN USA


KC 750
KC780
KC785
KCT32
KD32
KDB50
KMC11
KMC11-B
KMS11
KMS11-BD
KMS11-BE
KMS11-P
KMS1P-M
KU750
KU780
KW11-K
D-O-L
D-O-L
TECH TIPS
TECH TIPS
TECH TIPS
D-O-L
TECH TIPS
TECH TIPS
TECH TIPS
TECH TIPS
TECH TIPS
TECH TIPS
TECH TIPS
D-O-L
TECH TIPS
TECH TIPS
FCO's
FCO's
FCO's
FCO's
TECH TIPS
TECH TIPS

KC 750

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

D-O-L

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

digital
DIGITAL EQUIPMENT CORPORATION

Engineering Change Order Log
DEC O LOG

KC750

Keyswitch

PROCESSOR TYPE: VAX

KC750-R0001 CODE: F
SEPT 83 – PROBLEM: The KC750 option is not secure when the keyswitch is in the Remote/Secure position. This can allow the memory of a running system to be modified from the remote port even if the keyswitch is in the Remote/Secure position.
CORRECTION: Lock module's DMA port in either Local/Secure or Remote/ Secure position (one etch cut and two wire adds). Lock remote port DTR in either Local or Local/Secure position (one etch cut and four wire adds). Add new serial number tag to KPL. Correct CS-L0006-DM12, VA-L0006-00 and DD-L0006-00.
IN-PLANT EFFECTIVITY: Febuary 19, 1982
FIELD EFFECTIVITY: Retrofit all KC750's to Unit Revision Level 1. The minimum acceptable revision level of L0006 module in spares stock is: Etch Revision "B" CS Revision "B1". Etch Revision "C" CS Revision "D". This FCO incorporates ECO L0006-00004.
QUICK CHECK: Check for ECO wires on E6-3, 4; E12-12, 13; E133-12, 13, 14, 15; E176-24; and E187-5. Also check for Etch cuts on side two near E42-13 and E187-5.

The DEC on-site labor charge will be the time required to install and test the FCO at the then current hourly rate.
FCO KIT ORDERING:
FA-04440-00 FCO only

Copyright © 1983 by Digital Equipment Corporation
Printed in U S A

KC750-DOL-1

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

FCO's

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

10-Nov-1986
KC750-INDEX.A
REV A

MICROMEDIA PUBLISHING

Field Change Order Index

FCO Number	FA REV	Rel. Date	SB#	Problem
-KC750---R001	A	6-Sep-83	296	Option is not secure when the key-switch is in remote/secure posit

KC750- FCO-1

digital

FIELD CHANGE ORDER

FA-04440-00

FCO KC750 R 0001 **PAGE** 1 **of** 13

Level of Urgency (LOU)

STATUS / LOU	FCO EXPENSE RESPONSIBILITY		
	WARRANTY	**K**	**PER CALL**
Mandatory	DIGITAL		
Required			CUST
Specification			CUST
Improvement			CUST
Hardware Option	PURCHASEABLE OPTION		
Cosmetic	CUST	CUST	CUST

On-site FCO installation, by DEC, will be in accordance with both APPLICABILITY and the above FCO EXPENSE RESPONSIBILITY matrix.

ESTIMATED TIME TO INSTALL and TEST (on-site) (Travel time not included)

1.5 DECIMAL HOURS

APPLICABILITY

Retrofit all KC750's to Unit Revision Level 1.

The Mimimum acceptable revision levels of L0006 modules in spares stock is:

Etch Revision "B" CS Revision "B1"
Etch Revision "C" CS Revision "D"

This FCO incorporates ECO L0006-00004

QUICK CHECK (To determine if FCO has been installed)

See page 2

LAST PREVIOUS FCO: N/A

RELATED OR PREREQUISITE FCO's / MCO's FCO VAX 11/750-R0005 and FCO DW750-R0001

FCO KIT CHARGES (United States and Canada only)

KIT ITEM	DOCUMENTATION	PARTS	OTHER
	☐ FCO ☐ PRINTS		

Parts charges are as of FCO release date and are subject to change.

PARTS AVAILABILITY DATE September 1983

LOGISTICS CODING 400 0 350

LOGISTICS REVIEW R. Tracy Galvin

QTY PART NUMBER DESCRIPTION

SPECIAL TEST EQUIPMENT, TOOLS, or SUPPLIES (Not included in the Field Retrofit Kit)

See page 2

FIELD INSTALLATION and TEST PROCEDURE

See pages 3 through 4

FCO VAX 11/750-R0005 and DW750-R0001 should be implemented in conjunction with this FCO.

Order by This Number	Kit Contains FCO	Prints	Parts
FA-04440-00	X		

Problem Symptom: The KC750 option is not secure when the keyswitch is in the Remote/Secure position. This can allow the memory of a running system to be modified from the remote port even if the keyswitch is in the Remote/Secure position.

APPROVED-Field Service Product Support
Jim Powers
Jim Powers 8/22/83

APPROVED-Field Service Product Safety
Bob Barnard
Bob Barnard 9-2-83

Library: VAX

FCO RELEASE DATE
6 September 1983

KC750-FCO-1-A

NOTE

Multiwire boards (Etch Revision "A") should not be reworked. These modules are to be returned to the MRC and a new module ordered. (See RETROFIT PROCEDURE section for details.)

QUICK CHECK:

Check for ECO wires on E6-3,4;E12-12,13;E42-13; E133-12,13,14,15;E176-24;and E187-5. Also check for etch cuts on side two near E42-13 and E187-5.

SPECIAL TOOLS:

VELOSTAT Field Service Kit	DEC Part Number 29-11762

Micro diagnostic TU58 cassettes:

BE-S029N-DE
BE-S030M-DE
BE-S197I-AE

The following diagnostics from Diagnostic Release 12.

Diagnostic	Minimum Version	Title
ECKAB	9.0	VAX 11/750 Micro DPM
ECKAC	7.3	VAX 11/750 Micro MIC
ECKAF	3.1	VAX KC750 Udiag

RETROFIT PROCEDURE

FOR

FCO KC750-R0001

CAUTION

The L0006 module, as all VAX11/750 modules, contains electrostatic discharge sensative devices (ESDS). The use of the VELOSTAT kit is essential to prevent damage which may not be noticed immediately.

NOTE

Some early KC750's (Etch Revision "A") are multiwire boards. These modules can be identified by the presence of wire in the epoxy of the board on sides 1 and 2 rather than etch and are also marked as Etch Revision "A". These modules are NOT to be reworked, and should be returned, and new modules ordered.

1. Shut down system by executing shutdown command procedure.
2. Set five-position keyswitch on control panel to off and set circuit breaker CB1 on power controller to off.

KC750-FCO-3

WARNING

If five-position keyswitch on control panel is left on and circuit breaker on power controller is set to off, battery backup unit (if installed as an option) will be turned on.

3. Set up VELOSTAT KIT
   - Unfold the VELOSTAT mat to full size (24"x24")
   - Attach the 15' ground cord to the VELOSTAT snap fastener on the mat
   - Attach the alligator clip end of the ground cord to a good ground on the 11/750
   - Attach the wrist strap to either wrist and the alligator clip to a convenient portion of the mat.

4. Remove L0006 module from slot 6 and place it on the mat.

5. Cut etch, side 2, between E176 pin 24 and E187 pin 5 near E187 pin 5 (Figure 1).

6. Cut etch, side 2, between E42 pin 13 and E56 pin 14 near E42 pin 14 (Figure 2).

7. Install the following Wire Adds on Side 1.

FROM	TO	FIGURE
E12 pin 12	E42 pin 13	figure 3
E6 pin 3	E12 pin 13	figure 3
E6 pin 4	E133 pin 13	figure 4
E133 pin 15	E134 pin 8	figure 5
E133 pin 14	E176 pin 24	figure 6
E133 pin 12	E187 pin 5	figure 6

MODULE MARKING

If the module is an Etch Revision "B" then this rework brings it to Module Revision "B1". The "B1" can be scratched into the back of the handle or a "B" (pn 36-19209-02) and a "1" (pn 36-19208-01) Brady marker can be installed on the handle.

If the module is an Etch Revision "C" then this rework brings it to Module Revision of "D". The "D" can be scratched into the back of the handle or a "D" Brady marker (pn 36-19209-04) can be installed on the handle.

8. When rework is complete install the L0006 module back in to slot 6.

9. Power up the system.

10. Insert the TU58 cassette marked BE-S197I-AE into the drive.

11. Run the KC750 Udiag ECKAF version 3.1 or later.

12. Insert the TU58 cassette marked BE-S029N-DE into the drive.

13. Invoke the RDM monitor and run the DPM tests by typing TE

14. When this test is done replace the TU58 cassette with the one marked BE-S030M-DE, and run the MIC test by typing DI

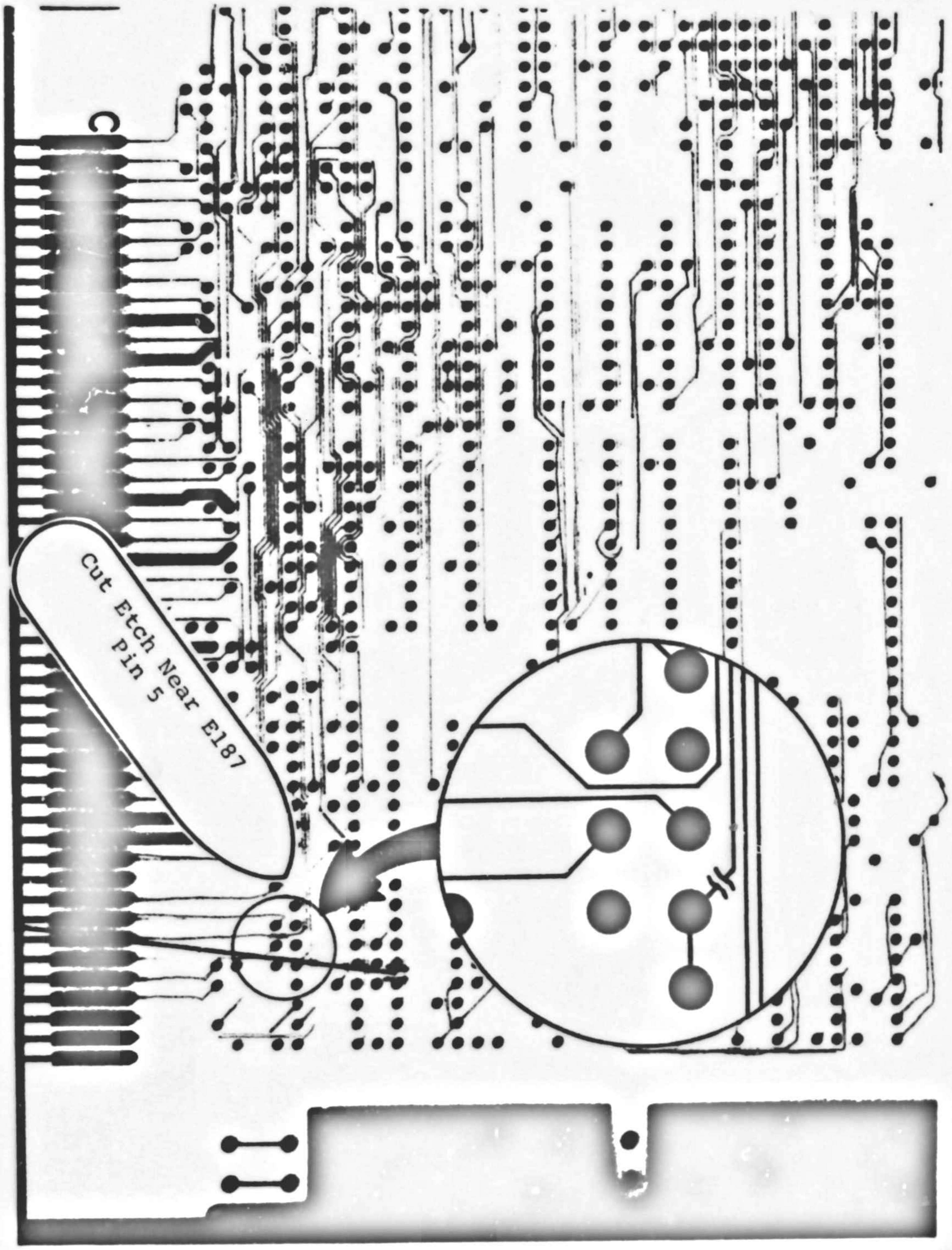
15. Power-up and bring up VMS.

16. Run UETP to verify the system is working.

17. Have the customer bring up his operating system if different than VMS brought up earlier.

18. Update the Site Management Guide to reflect this FCO.

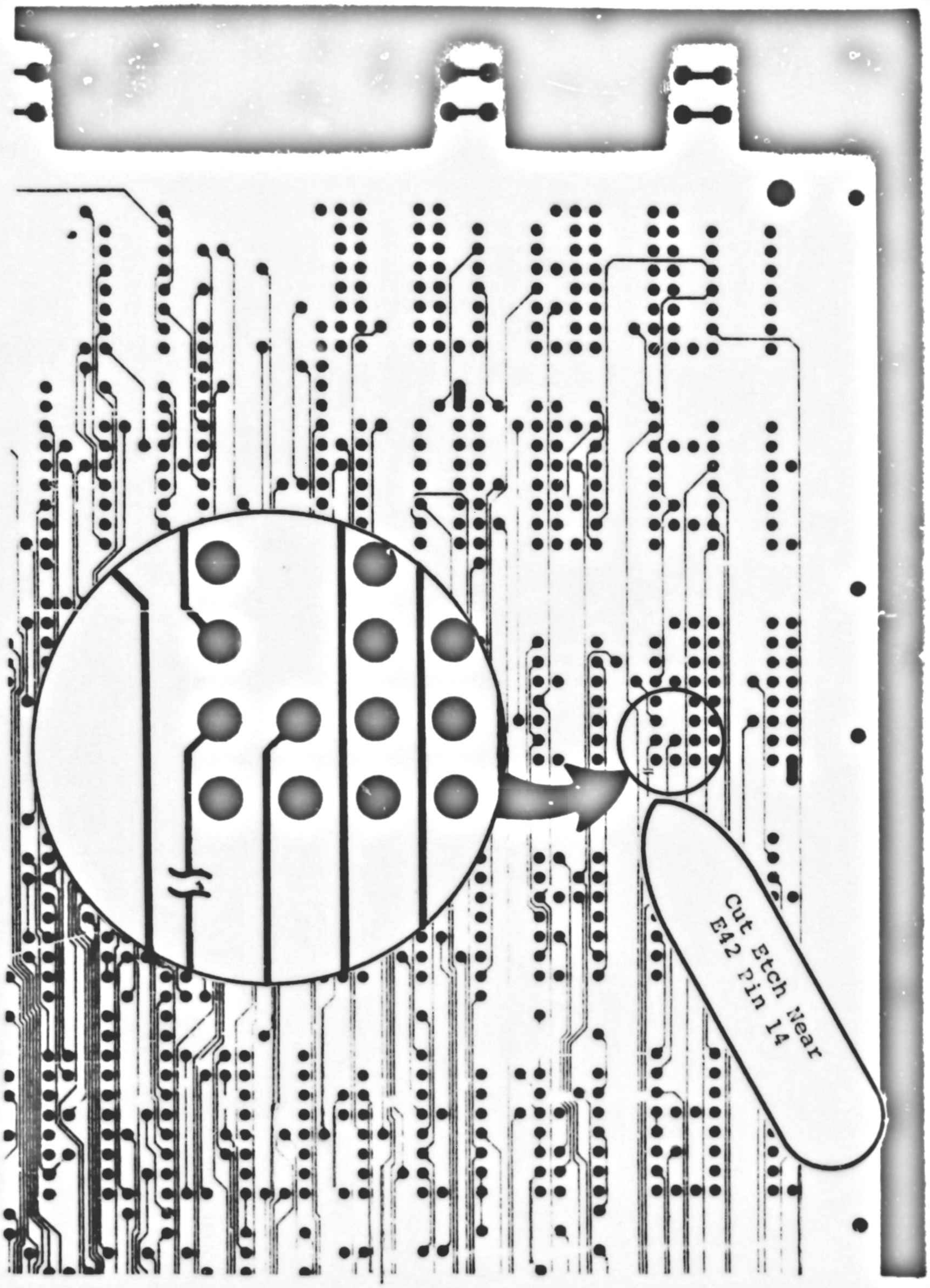
19. Report FCO activity on LARS form in the " Fail Area-Module-FCO Comments" column as indicated on samples.



Cut Etch Near E187
Pin 5

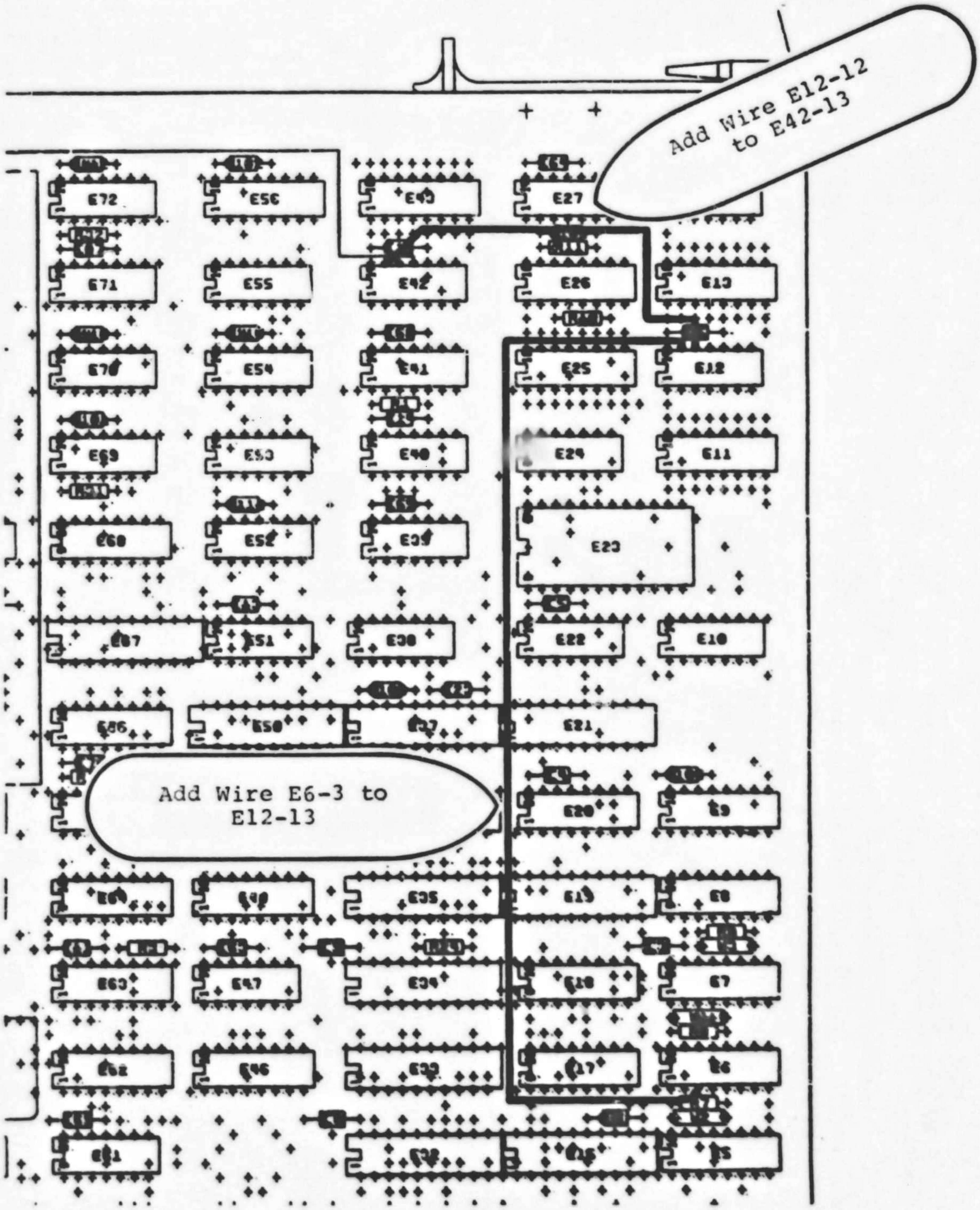
Figure 1

KC750-FCO-6



Cut Etch Near
E42 Pin 14

Figure 2



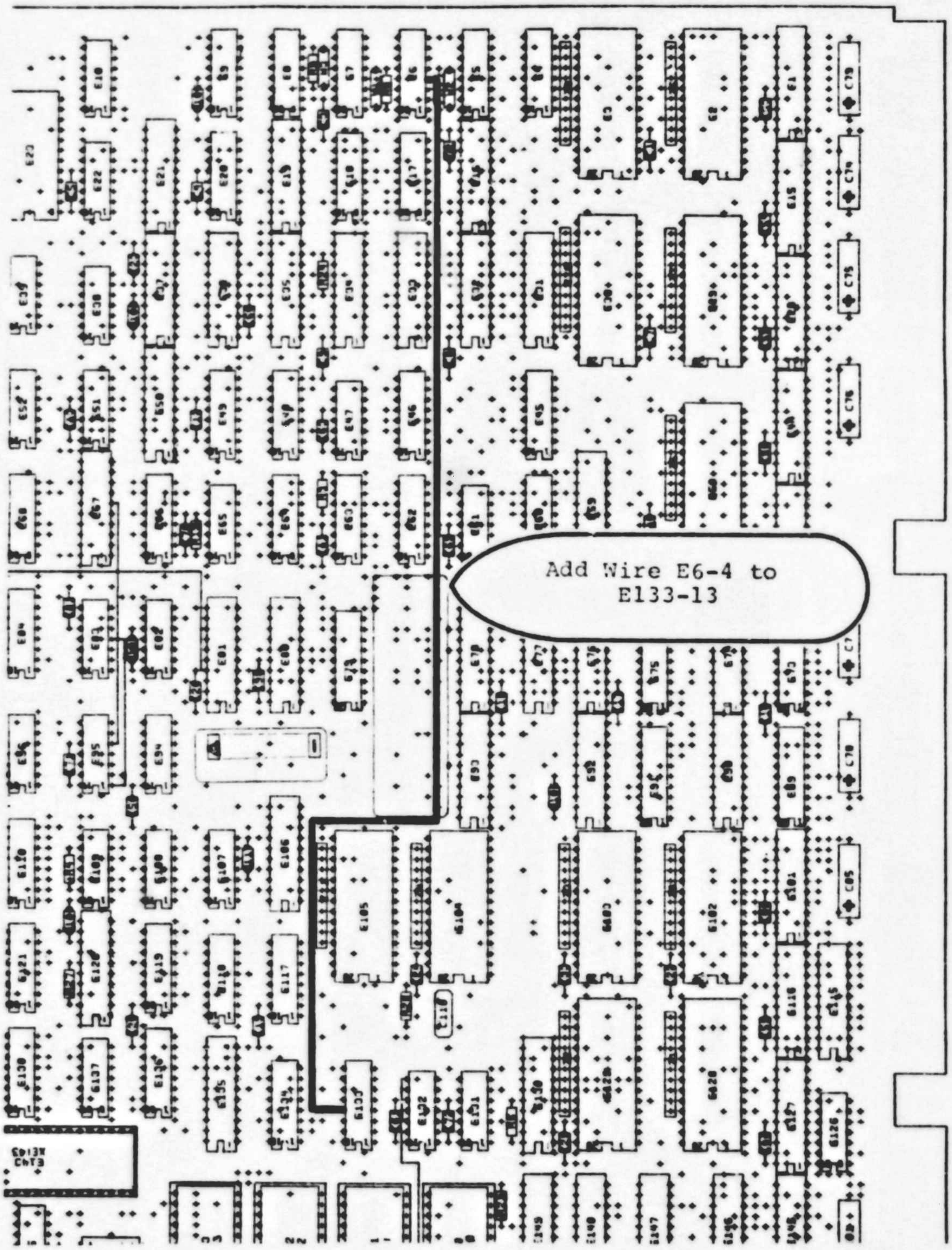
Add Wire E12-12 to E42-13

Add Wire E6-3 to E12-13

E72
E56
E43
E27
E71
E55
E42
E26
E13
E70
E54
E41
E25
E12
E69
E53
E40
E24
E11
E68
E52
E39
E23
E67
E51
E38
E22
E10
E66
E50
E37
E21
E20
E9
E64
E48
E35
E19
E8
E63
E47
E34
E18
E7
E62
E46
E33
E17
E6
E61
E32
E16
E5

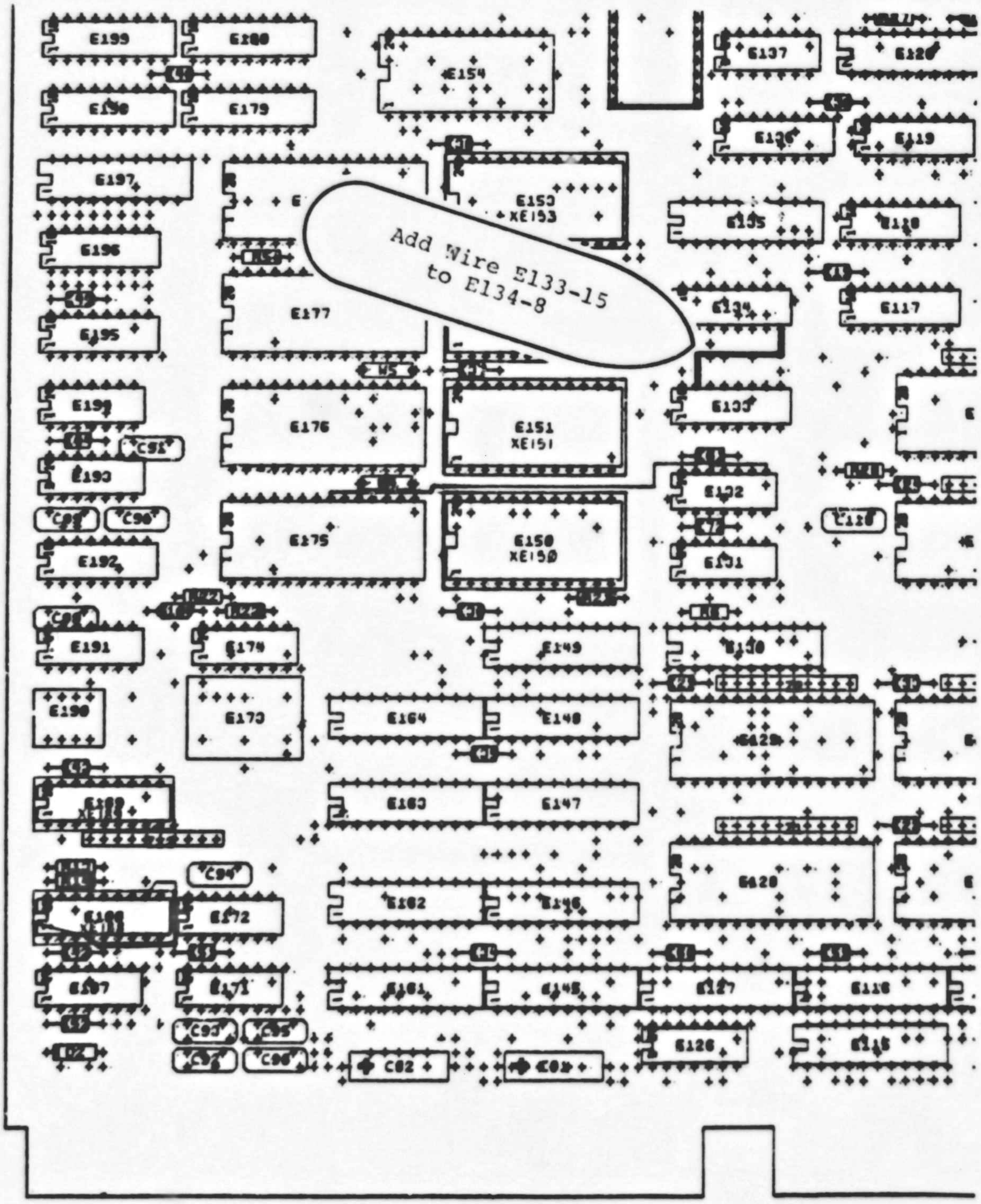
Figure 3

KC750-FCO-8



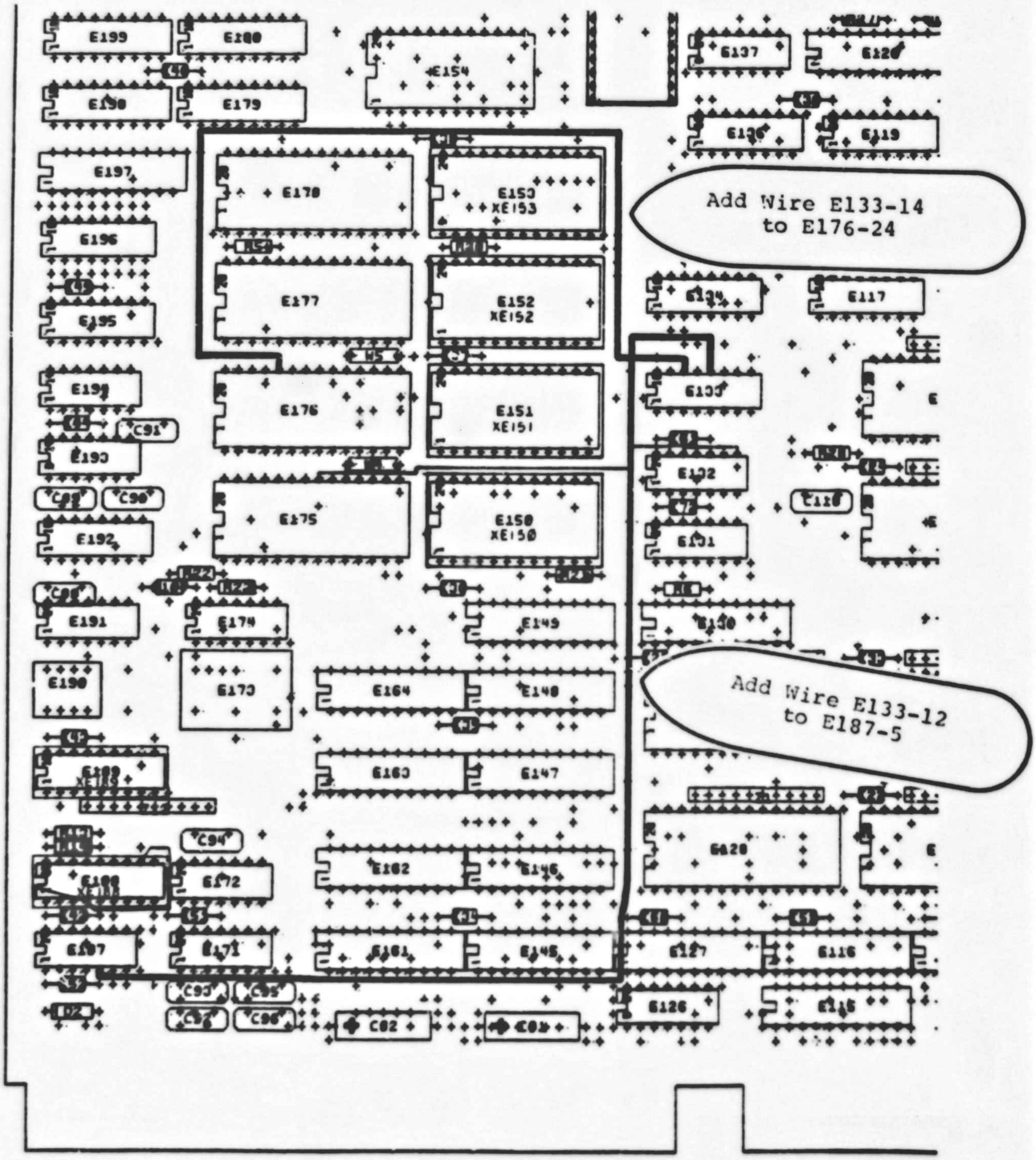
Add Wire E6-4 to E133-13

Figure 4


E199
E200
E154
E137
E179
E136
E119
E197
E153
XE153
E135
E118
E196
E177
E134
E117
E195
E176
E151
XE151
E133
E193
E132
E175
E150
XE150
E131
E192
E191
E174
E149
E190
E173
E164
E148
E163
E147
E172
E162
E146
E171
E161
E145
E127
E116
E126
E115
C82
C91
C90
C94
W5

Add Wire E133-15 to E134-8

Figure 5


E199
E200
E154
E137
E120
E198
E179
E136
E119
E197
E178
E153
XE153
E196
E177
E152
XE152
E134
E117
E195
E194
E176
E151
XE151
E133
C91
E193
E132
C89
C90
C128
E175
E150
XE150
E192
E131
C88
E191
E174
E149
E130
E190
E173
E164
E148
E189
E163
E147
C94
E128
E188
E172
E162
E146
E187
E171
E161
E145
E127
E116
C93
C95
C97
C96
C82
C81
E126
E115

Add Wire E133-14 to E176-24

Add Wire E133-12 to E187-5

Figure 6

KC750-FCO-11

digital
LARS REPORT

CUSTOMER NAME
EQUIPMENT LOCATION (CITY AND STATE)
SAMPLE ONLY

REPORT NO. 9666789
PAGE ___ OF ___

EMPLOYEE BADGE NO	EMPLOYEE C C	UNIT	EMPLOYEE LAST NAME	☐ ARE YOU ASSIGNED PERSON? (Y OR N)	☐ IS CALL COMPLETE? (Y OR N)	LOG NUMBER

MACHINE NO	EXT.	PROD LINE	SYSTEM/PROCESSOR TYPE VARIANT	SYSTEM SERIAL NUMBER MFG PLANT VARIANT	DEC NUMBER

TRAVEL HOURS	REQUEST TIME	REQUEST DATE DAY MONTH YEAR	START TIME	START DATE DAY MONTH YEAR	STOP TIME	STOP DATE DAY MONTH YEAR

LINE ITEM	ACTIVITY	REPAIR TIME	DEC OPTION VARIANT	DEC OPTION SER NO	TYPE OF CALL		FAIL AREA - MODULE - FCO - COMMENTS	AUTHORIZED TESTS
A	W		KC750		M	D	FCO KC750-R1	
B								
C								
D								
E								
TOTAL HOURS								

MATERIAL USED

LINE ITEM	QTY.	CLASS	DEC PART NUMBER BASIC	VARIANT	T T	PART DESCRIPTION VENDOR PART NO	AMOUNT
							$
							$
							$
							$
							$
							$
LOGISTICS APPROVAL		TOTAL MATERIAL COST					$

LABOR ______ HOURS @ $ ______ PER HOUR	$
LABOR ______ HOURS @ $ ______ PER HOUR	$
TOTAL LABOR COSTS	$
TOTAL MATERIAL COST	$
TRAVEL COST	$
	$
	$
	$
SUB TOTAL (ALL SHADED AREAS)	$
TO BE FILLED IN BY BILLING ONLY	
LABOR TAX ______ %	$
MATERIAL TAX ______ %	$
TOTAL	$

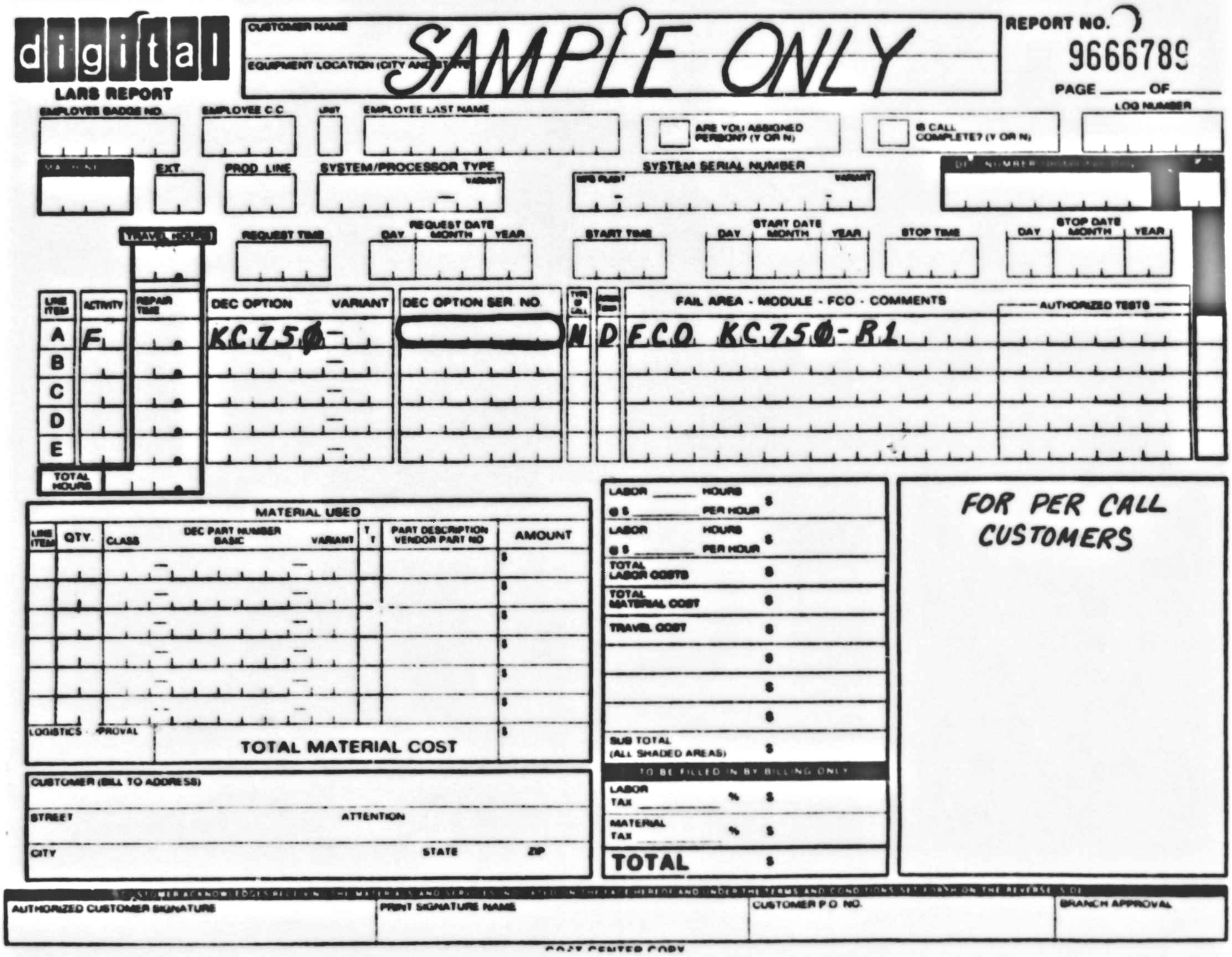
FOR CONTRACT AND WARRANTY CUSTOMERS

CUSTOMER (BILL TO ADDRESS)
STREET ATTENTION
CITY STATE ZIP

CUSTOMER ACKNOWLEDGES RECEIPT OF THE MATERIALS AND SERVICES INDICATED ON THE FACE HEREOF AND UNDER THE TERMS AND CONDITIONS SET FORTH ON THE REVERSE SIDE

AUTHORIZED CUSTOMER SIGNATURE	PRINT SIGNATURE NAME	CUSTOMER P O NO	BRANCH APPROVAL

COST CENTER COPY



digital

LARS REPORT

CUSTOMER NAME

EQUIPMENT LOCATION (CITY AND STATE)

SAMPLE ONLY

REPORT NO. 9666789

PAGE ____ OF ____

EMPLOYEE BADGE NO	EMPLOYEE C C	UNIT	EMPLOYEE LAST NAME	☐ ARE YOU ASSIGNED PERSON? (Y OR N)	☐ IS CALL COMPLETE? (Y OR N)	LOG NUMBER

[illegible]	EXT	PROD LINE	SYSTEM/PROCESSOR TYPE VARIANT	SYSTEM SERIAL NUMBER MFG PLANT VARIANT	DT NUMBER

TRAVEL HOURS	REQUEST TIME	REQUEST DATE DAY	MONTH	YEAR	START TIME	START DATE DAY	MONTH	YEAR	STOP TIME	STOP DATE DAY	MONTH	YEAR

LINE ITEM	ACTIVITY	REPAIR TIME	DEC OPTION	VARIANT	DEC OPTION SER. NO.	TYPE OF CALL		FAIL AREA - MODULE - FCO - COMMENTS	AUTHORIZED TESTS
A	F		KC750			N	D	FCO KC750-R1	
B									
C									
D									
E									
TOTAL HOURS									

MATERIAL USED

LINE ITEM	QTY.	CLASS	DEC PART NUMBER BASIC	VARIANT	T T	PART DESCRIPTION VENDOR PART NO	AMOUNT
							$
							$
							$
							$
							$
							$
LOGISTICS APPROVAL		TOTAL MATERIAL COST					$

LABOR ____ HOURS @ $ ______ PER HOUR	$
LABOR HOURS @ $ ______ PER HOUR	$
TOTAL LABOR COSTS	$
TOTAL MATERIAL COST	$
TRAVEL COST	$
	$
	$
	$
SUB TOTAL (ALL SHADED AREAS)	$
TO BE FILLED IN BY BILLING ONLY	
LABOR TAX ______ %	$
MATERIAL TAX ______ %	$
TOTAL	$

FOR PER CALL CUSTOMERS

CUSTOMER (BILL TO ADDRESS)

STREET ATTENTION

CITY STATE ZIP

CUSTOMER ACKNOWLEDGES RECEIPT OF THE MATERIALS AND SERVICES INDICATED ON THE FACE HEREOF AND UNDER THE TERMS AND CONDITIONS SET FORTH ON THE REVERSE SIDE

AUTHORIZED CUSTOMER SIGNATURE	PRINT SIGNATURE NAME	CUSTOMER P O NO.	BRANCH APPROVAL

COST CENTER COPY

TECH. TIPS

18-Aug-1987
KC750-INDEX.A
REV A

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KC750--TT-01	A	18-Aug-87	494	L000G-YA orders by field techs

KC750 -TT-1

Field Service TECH TIP

digital™

Page 1 of 1

Category Systems
Rev A
Title L0006-YA Orders by Field Techs
Option KC750
TECH TIP No. KC750-TT-01
Cross Reference N/A

Problem/Solution

Stockroom 17 has confirmed that we have been seeing orders for the L0006-YA module from field service branches. This module is a diagnostic tool for Self-Maintenance Customers. There is no RDC support for this module.

The RD tool for field service is the L0006-00 module.

Both the L0006-00 and L0006-YA modules have been upgraded with an ECO which corrects the problem of intermittently failing to drive the WBUS causing false micro-diagnostic errors.

NOTE: INTERNAL FIELD SERVICE TECHS--DO NOT ORDER THE L0006-YA MODULE. THIS IS IN SHORT SUPPLY AND IS A SELF-MAINTENANCE CUSTOMER TOOL.

Approvals

Author Rose Murphy	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE Rose Murphy
Author's Manager Jan Sicard		Field Service Product Safety
Release Date 18 August 1987		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation. For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

KC750-TT-2

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

KC780

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

D-O-L

FCO FIELD CHANGE ORDER LOG

digital

KC780

DEC-O-LOG

RX01-VA

LIBRARY TYPE

VAX

KC780-M0001 CODE: F

APR 84 - PROBLEM: The Floppy Drive Motor AC wires are too loose and can come into contact with the blades of the Muffin Fan Assembly. This results in cutting the wire and shorting the wires to the fan hub and the chassis.

CORRECTION: Dress the Floppy Drive Motor's AC wires so that there is no excess wire near the Muffin Fan and lock in place with the Cable Tie.

IN-PLANT EFFECTIVITY: Feb 84

FIELD EFFECTIVITY: Retrofit the Floppy Drive Motor Power Cords used on the RX01-VA Floppy Disk Drive in the KC780 Subsystem.

QUICK CHECK: Presence of a Cable Tie just to the right of the Chassis Cable Tie.

The DEC on-site labor charge will be the time required to install and test the FCO at the then current hourly rate.

FCO KIT ORDERING:
EQ-01238-01: FCO, PARTS
FA-04508-01: FCO only

Copyright © 1984 by Digital Equipment Corporation
Printed in U.S.A.

FCO's

10-Nov-1986
KC780-INDEX.A
REV A

MICROMEDIA PUBLISHING

Field Change Order Index

FCO Number	FA REV	Rel. Date	SB#	Problem
-KC780---M001	A	18-Apr-84	328	Loose AC wires-can come in contact w/ blades of Muffin Fan assembly

KC780-FCO-1

digital

FIELD CHANGE ORDER

FA-04508-01

FCO KC780 M 0001 **PAGE** 1 **of** 12

Level of Urgency (LOU)

FCO EXPENSE RESPONSIBILITY

STATUS / LOU	WARRANTY	K	PER CALL
Mandatory	DIGITAL		
Required			CUST
Specification			CUST
Improvement			CUST
Hardware Option	PURCHASEABLE OPTION		
Cosmetic	CUST	CUST	CUST

On-site FCO installation, by DEC, will be in accordance with both APPLICABILITY and the above FCO EXPENSE RESPONSIBILITY matrix.

ESTIMATED TIME TO INSTALL and TEST
(on-site)
(Travel time not included)

.5

DECIMAL HOURS

APPLICABILITY

Retrofit Floppy Drive Motor Power Cords used on the RX01-VA Floppy Disk Drive in the KC780 Subsystem.

See pages 6 though 10 of this FCO for applicable systems.

******NOTE******

This FCO is Mandatory on these systems only.

QUICK CHECK (To determine if FCO has been installed)

Presence of a Cable Tie just right of the Chassis Cable Tie.

LAST PREVIOUS FCO # None.

RELATED OR PREREQUISITE FCO #/ MCO #

None.

SPECIAL TEST EQUIPMENT, TOOLS, or SUPPLIES
(Not included in the Field Retrofit Kit)

Field Service Tool Kit.

FCO KIT CHARGES (United States and Canada only)

KIT ITEM	DOCUMENTATION	PARTS	OTHER
	☐ FCO ☐ PRINTS		

Parts charges are as of FCO release date and are subject to change.

PARTS AVAILABILITY DATE May 1984

LOGISTICS CODING 250 - 250 - 300

LOGISTICS REVIEW EM Duggan 4/13/84

QTY	PART NUMBER	DESCRIPTION
1	90-07031-00	Tie Cable, small
1	91-07305-09	Tube, Shrink

Order by This Number	Kit Contains FCO	Prints	Parts
EQ-01238-01	X		X
FA-04508-01	X		

FIELD INSTALLATION and TEST PROCEDURE

See pages 2 through 5 of this FCO.

Problem/Symptom: The Floppy Drive Motor AC wires are too loose and can come into contact with the blades of the Muffin Fan Assembly. This results in cutting the wire and shorting the wires to the fan hub and chassis.

Correction: Dress the Floppy Drive Motor's AC wires so that there is no excess wire near the Muffin Fan and lock in place with a cable tie.

APPROVED–Field Service Product Support
John E Stevens
John Stevens

APPROVED–Field Service Product Safety
Bob Barnard 4 13-84

Library: Vax

April 18, 1984
FCO RELEASE DATE

KC780-FCO-1A

FIELD INSTALLATION AND TEST PROCEDURE
FOR
FCO KC780-M0001

1. Shut down the System by executing the shutdown command procedure.

> **CAUTION**
>
> Set the five-postions keyswitch on the controller panel to the "OFF" position and set Circuit Breaker CB1 on the power controller to the "OFF" position.

2. Set all Memory Power Supply Circuit Breakers to the "OFF" position.

3. If the backplane is in an external cabinet, turn "OFF" power to that cabinet by throwing the power controllers's Main Breaker and the Memory Power Supply Circuit Breaker.

> **"WARNING"**
>
> If Memory Power Supply Circuit Breaker is "ON" and Circuit Breaker on the power controller is set to the "OFF" position, battery backup (if installed option) will be turned "ON". To turn "OFF" battery backup unit, Memory Power Supply must be turned "OFF".

4. Remove cover from floppy drive (figure 1). The cover is held in place by four screws.

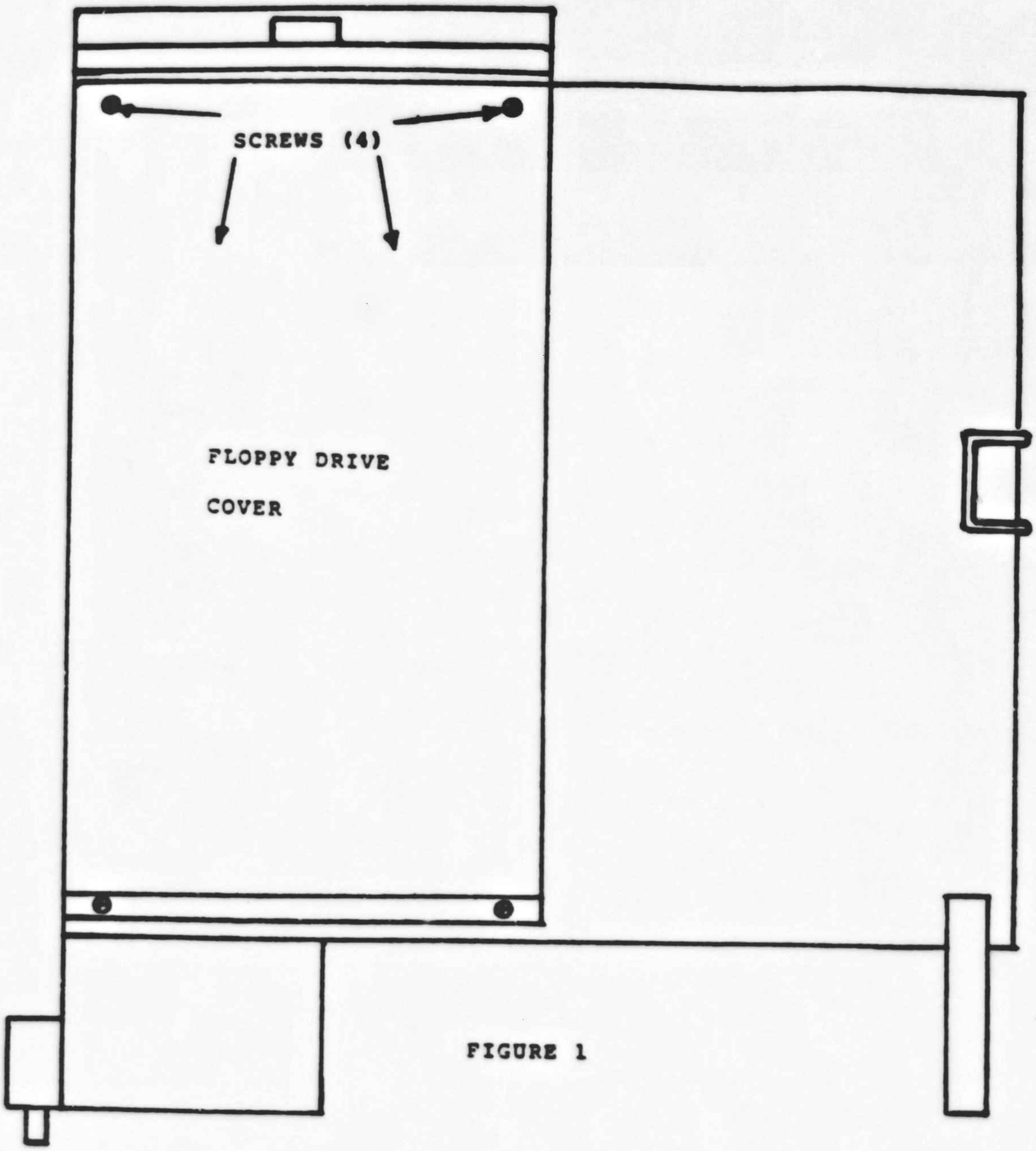

SCREWS (4)
FLOPPY DRIVE
COVER

FIGURE 1

5. Carefully inspect the two (2) black drive motor wires to assure that the insulation has not been damaged by contact with the moving elements of the Muffin Fan. (If insulation has been damaged, repair the wire by using the shrink tubing (91-07305-09).

6. Secure the two (2) black motor wires.

    6.1 Grasp the two black wires at the right of the cable tie (installed through the opening in the chassis). Remove any slack from the wires.

> **CAUTION**
>
> Pull wires tight enough to remove slack, but refrain from using excessive force that could damage connections inside the motor housing.

    6.2 Install an additional cable tie to the right of and as close as possible to the cable tie (installed in the chassis). This will prevent wires from coming into contact with the moving elements of the Muffin Fan. (See Figure 2).

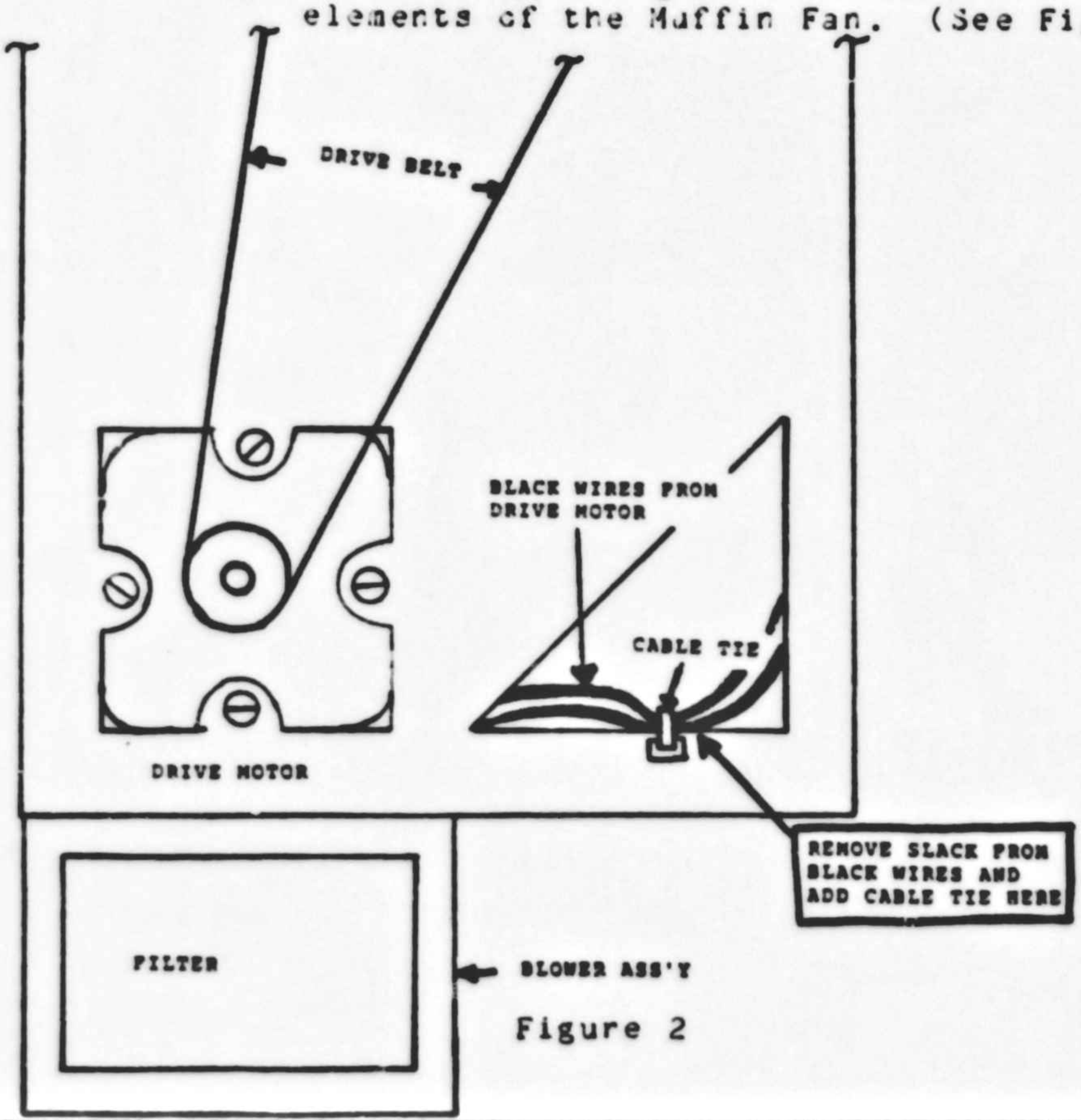

DRIVE BELT
BLACK WIRES FROM DRIVE MOTOR
CABLE TIE
DRIVE MOTOR
REMOVE SLACK FROM BLACK WIRES AND ADD CABLE TIE HERE
FILTER
BLOWER ASS'Y

Figure 2

7. Place the cover on Floppy Drive.

8. Turn the main power on by placing the Main Breaker (CB1) to the "ON" position.

9. Turn System power "ON" by turning the key switch to the "ON" position.

10. Boot the System using the normal boot procedures.

11. Fill out Lars form to reflect that FCO KC780-M0001 has been installed.

```
****************************************
*                 NOTE                 *
*                                      *
*  This information is necessary for   *
*  validating installation of the FCO. *
*                                      *
****************************************
```

digital

FCO KC780-M0001

PAGE 6 OF 12

FXO #	DEC NUMBER	CUSTOMER	INSTALLING COST CENTER
223	82F83495X	LORAL CORP	70N
224	82F14777K	COMSAT GENERAL	703
225	820651170	MCDONNELL DOUGLAS	7AP
226	82C15925X	PHIL.COLLEGE	78K
227	82C66217X	GENERAL ELECTRIC	7LN
228	82F55939K	WESTERN NEW MEX. UNIV.	7BR
229	82F72485H	MCDONNELL DOUGLAS	7AP
232	82F36291K	TEKTRONIX, INC	750
233	82F96242X	TULANE UNIV.	765
234	82F58271H	LAWRENCE INSTIT.	708
235	82F52085H	INDIANA UNIV.	783
236	82F22576K	CLAREMONT GRAD SCHOOL	7AP
237	82F27237H	OAKLAHOMA	UNKNOWN
238	82F17614H	ILL. CEN. GULF	76L
239	82F42714K	NCR CORP.	7R7
240	82F20616H	UNIV. OF HOUSTON	7LC
241	82F31595N	MOHAWK VALLEY COMM	78R
242	82F35538H	GENERAL MOTORS	734
243	82F28527H	UNIV. OF TEXAS	7MT
244	82F46860H	UNIV. OF WIS.	7PE
245	82F14551N	GTE PROD. CORP.	7QT
246	82F36334K	TEKTRONIX INC.	750
247	82F31516X	RUTGERS STATE UNIV	79J
250	82F51719K	KITCHELL CONTRACTORS	779
252	82F14829K	SILICON GRAPHICS	703
253	82F45246X	AMERICAN SATELLITE	72J
254	82F14775N	GTE LABS	7QT
255	82F52048H	BALL STATE UNIV.	75M
256	82F18794K	DIGITAL INC. FINANCE	78H
257	83020009H	SCHLUMBERGER WELL	7LC
258	82F40623K	UNIV.OF COLORADO	7R7
260	83070828X	JFK SPACE CENTER	7QZ
261	82F23977N	BELL TELEPHONE LABS	713
262	82F46863K	UTAH STATE UNIV.	748
263	82F18144K	AEROJET TACTICAL SYS.	7H9
264	83070202X	DIGITAL INC. FINANCE	7QY
266	82F66878X	VIRGINIA COMM. UNIV.	71R
267	82F58619H	GENERAL MOTORS	708
268	82F77551H	KING RADIO	71P
269	82F64684K	U.S. CAROL	UNKNOWN
270	82F58076H	DIGITAL LEASING	708
271	82F28911N	GENERAL ELECTRIC	713
272	82F57858X	COMSAT GEN'L INTEGRATED	78E
273	82F23004K	XEROX	7AP
274	82F14784K	FAIRCHILD CAMERA	703
275	82F32787K	JOHN FLUKE MFG.	7X7
276	830692010	SCANLON	UNKNOWN
277	83013122H	SKIDMORE OWINGS MERRILL	79X
279	82F23965N	INTERLEASE CORP.	713

KC780-FCO-6

FXO #	DEC NUMBER	CUSTOMER	INSTALLING COST CENTER
280	82F33330N	UNION COLLEGE	793
281	82F48086H	UNIV. OF IOWA	7WQ
282	82F14754N	BOSTON COLLEGE	7QT
286	83037234H	GENERAL ELECTRIC	78L
290	83027029N	MICRO GROUP	9UH
293	82C66837X	HAMPTON INSTITUTE	7JM
294	82068769X	WESTERN CAROLINA UNIV.	780
295	82F37193N	SCIENTIFIC CALCULATION	71G
296	82F24348H	TEXAS TECH	7MN
297	83010000K	ZILOG CORP.	703
298	83086010X	MERGENTHALER LINOTYPE	772
299	82035009N	EASTMAN KODAK CO.	768
300	83036013K	TEKTRONIC INC.	750
301	82F15972X	AMERICAN INSTITUTE	771
303	82036951G	DIGITAL	74C
306	83010048K	VALID LOGIC SYSTEMS	703
307	82F14767K	ATARI INC	703
308	82F15466K	WESTINGHOUSE	UNKNOWN
309	82F66875X	JAMES MADISON UNIV.	7LN
314	82F15760X	CARNEGIE MELLON UNIV.	7KH
315	8251110U0	ROSEMONT ENG.	UNKNOWN
316	83026517N	GENERAL ELECTRIC	713
317	82F18836K	FINANCE & MGMT SYS.	78H
318	83035054H	US AIR FORCE	734
323	8351115NO	BOEING	UNKNOWN
325	83012599K	ATARI INC.	703
329	82F45245X	SPACE COMM	72J
330	82F77560H	N.W. MISSOURI STATE	71P
331	82F18845K	FINANCE & MGMT SYS.	78H
332	82F43754N	HAMILTON	743
333	83013806H	NORTHROP CORP	707
335	82F21672H	SCHLUMBERGER WELL	7LC
336	82F52086H	INDIANA UNIV	783
337	83011206K	LOCKHEED MISSILES	7CJ
338	83010038K	CALIF MICRO DEVICES	703
339	83012611K	FAIRCHILD CAMERA	703
341	83087065X	MANHATTEN COLLEGE	705
342	83010028K	GTE LENKERT	703
343	8300252U0	W.E. MICH UNIV.	UNKNOWN
344	83018005K	AEROJET STRATEGIC	7H9
345	83027669K	LINKABIT	751
351	83070030H	UNION ELECTRIC	735
352	83050461K	GTE PRODUCTS	779
353	83024051H	PARSEC SYSTEMS	732
355	83002543U	INDIANA	UNKNOWN
356	83002540U	JOHNSON COUNTY	UNKNOWN
363	83010059K	FOUR PHASE SYSTEMS	703
364	83016156K	SANDIA LABS	749
365	83025702K	PDA ENGINEERING	702

KC780-FCO-7

FXO #	DEC NUMBER	CUSTOMER	INSTALLING COST CENTER
366	83040099K	COLORAO STATE UNIV.	7R8
367	8351117UO	MEDTRONIC	UNKNOWN
368	83023389H	GENERAL MOTORS	UNKNOWN
369	82F14779N	TUFTS UNIV.	7QT
371	82F52087H	INDIANA UNIV	783
378	83030246X	RCA GLOBAL	79J
379	83051270H	US NAVAL AVIONICS	783
380	82F77442H	PANHANDLE PIPE	71P
384	83022954K	TRANSACTION TECK,INC.	7VE
385	83027777K	HEWLETT PACKARD	751
386	83044108K	NCR	7R8
388	83014058H	SKIDMORE	76L
392	83002558U	DELAWARE	UNKNOWN
403	840350604	UNKNOWN (INTERNAL)	7YS
410	82C15954X	UNIV. OF DEL.	70J
413	83030243X	U.S. ARMY	79J
417	83071352G	ORICOM	7NW
421	83020468H	UNIV OF TEXAS	75A
427	830359966	CGEE ALSTHOM	7Q4
431	83032928X	ITT	7BZ
433	83037110H	EASTERN KENTUCKY UNIV	78L
434	83037215H	NORTHERN KENTUCKY UNIV	78L
436	83037222H	COMMON OF KENTUCKY	78L
438	83030267X	RCA	79J
439	82F37150N	ALFRED UNIV	768
441	83023049K	NORTHROP CORP	7AP
442	83036052N	SCIENTIFIC CALC.	771
443	83021066H	UNIV.OF TEXAS	75A
447	83030247X	RCA GLOBAL	79J
448	83011426K	INTEL CORP	703
449	83011357K	INTEL CORP	703
450	83023204K	HUGHES AIRCRAFT	7AP

Internal Customers:

FXO #	DEC NUMBER	SHIP TO	LOCATION
230	810600540	P&SG	MKO/MERRIMAC, N.H.
231	820643020	KEVIN ST. GEORGE	ZKO/NASHUA, N.H.
248	820675340	TOM DRESEN	BUO/BEDFORD, MA
249	820649310	KEVIN ST.GEORGE	ZKO/NASHUA, N.H.
251	820665510	KEVIN ST. GEORGE	ZKO/NASHUA, N.H.
259	810600550	" " "	" "
292	8351113NO	UNKNOWN	UNKNOWN
304	825110900	MARTIN MARETTA	UNKNOWN
305	825110800	MARTIN MARETTA	UNKNOWN
319	830692090	RICK WATSON	RLO/CHICAGO, ILL.
320	820678970	KEVIN ST. GEORGE	ZKO/NASHUA, N.H.
321	820685360	AL MORRISSETTE	LTN/LITTLETON, MA.
322	830692030	SCANLON	UNKNOWN
324	830692020	LEE MARSHALL	PRINCETON, N.J.
327	820649360	DOUG MIRANDA	TFO/TEMPE, AZ.
334	830692040	GILBERT	UNKNOWN
340	830692070	GILBERT	UNKNOWN
347	840799090	UNKNOWN (INTERNAL)	(743 INSTALL CC)
350	8351138NO	UNKNOWN	UNKNOWN
354	830692100	BARTLET	UNKNOWN
362	820685340	AL MORRISSETTE	LTN/LITTLETON, MA.
370	820669330	FREY	UNKNOWN
381	820669550	AL DOUCET	MKO/MERRIMACK,N.H.
382	830689940	FLINT BACHELDER	OGO/STOWE, MA.
393	830692120	LARRY LEWIS	100 BUSH STREET
412	830692110	LARRY LEWIS	100 BUSH STREET
418	83071428G	UNKNOWN	UNKNOWN
432	830705340	TOM DRESDEN	BUO/BEDFORD, MA.
437	830692060	LORENTZEN	UNKNOWN
440	830672340	DOUG CARPENTER	2500 W UNION HILL PHOENIZ, ARI.
444	830702010	UNKNOWN	UNKNOWN

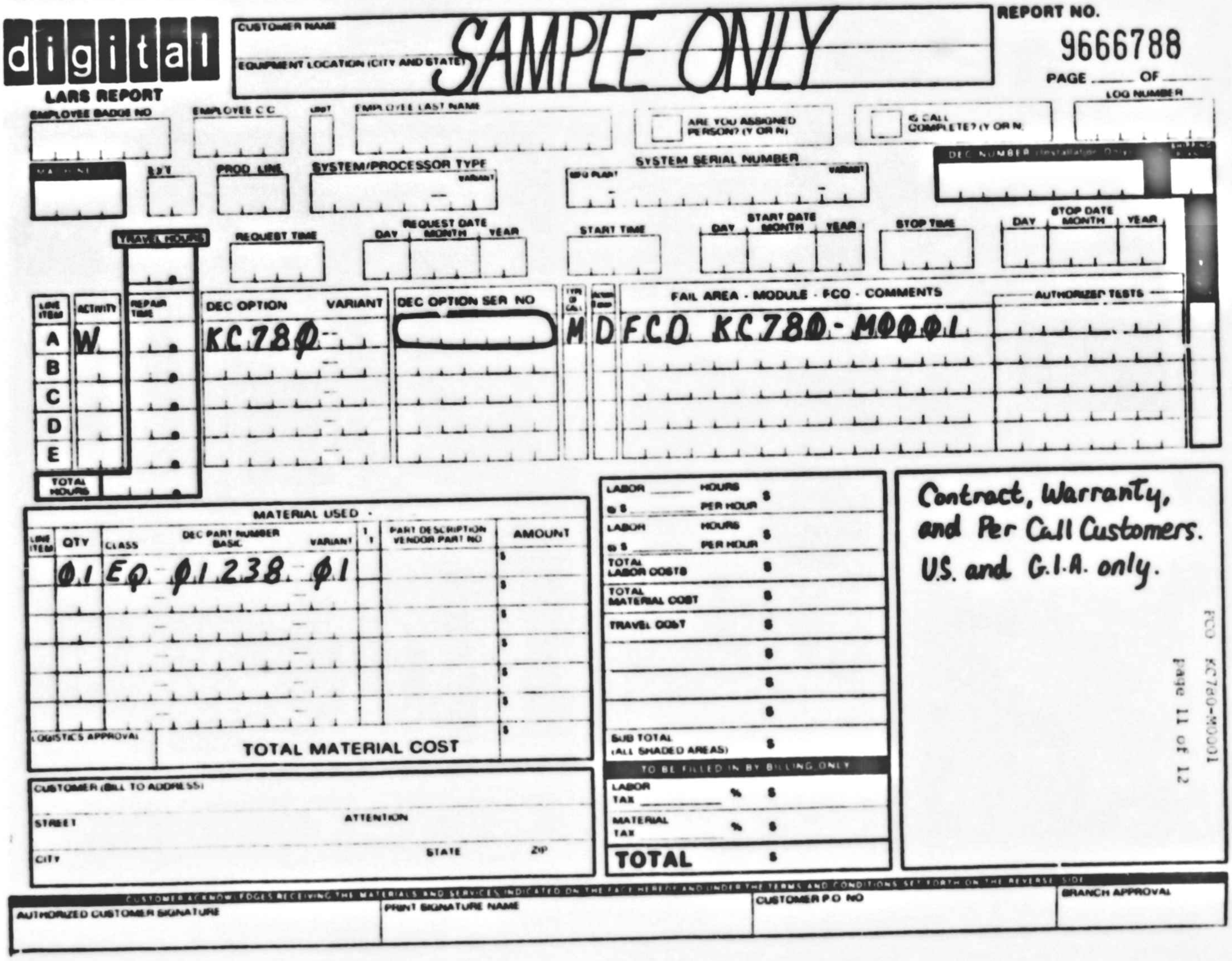
KC780-FCO-9

NOTE

The following are CPU Serial Numbers for which customers cannot be found.

FX0265
FX0278
FX0283
FX0284
FX0285
FX0287
FX0288
FX0289
FX0291
FX0302
FX0310
FX0311
FX0312
FX0313
FX0326
FX0328
FX0346
FX0348
FX0349
FX0357
FX0358
FX0359
FX0360
FX0361
FX0372
FX0373
FX0374
FX0375
FX0376
FX0377
FX0383
FX0387
FX0389
FX0390
FX0391
FX0394
FX0395
FX0396
FX0397
FX0398
FX0399
FX0400
FX0401
FX0402
FX0404
FX0405
FX0406
FX0407
FX0408
FX0409
FX0411
FX0414
FX0415
FX0416
FX0419
FX0420
FX0422
FX0423
FX0424
FX0425
FX0426
FX0428
FX0429
FX0430
FX0435
FX0445
FX0446

KC780-FCO-10



digital
LARS REPORT

CUSTOMER NAME: SAMPLE ONLY
EQUIPMENT LOCATION (CITY AND STATE)

REPORT NO. 9666788
PAGE ____ OF ____
LOG NUMBER

EMPLOYEE BADGE NO
EMPLOYEE C C
UNIT
EMPLOYEE LAST NAME
☐ ARE YOU ASSIGNED PERSON? (Y OR N)
☐ IS CALL COMPLETE? (Y OR N)

MACHINE
EST
PROD LINE
SYSTEM/PROCESSOR TYPE — VARIANT
SYSTEM SERIAL NUMBER — MFG PLANT — VARIANT
DEC NUMBER (Installation Only)

TRAVEL HOURS
REQUEST TIME
REQUEST DATE: DAY, MONTH, YEAR
START TIME
START DATE: DAY, MONTH, YEAR
STOP TIME
STOP DATE: DAY, MONTH, YEAR

LINE ITEM	ACTIVITY	REPAIR TIME	DEC OPTION	VARIANT	DEC OPTION SER NO	TYPE OF CALL		FAIL AREA - MODULE - FCO - COMMENTS	AUTHORIZED TESTS
A	W		KC780			M	D	FCO KC780-M0001	
B									
C									
D									
E									
TOTAL HOURS									

MATERIAL USED

LINE ITEM	QTY	CLASS	DEC PART NUMBER BASIC	VARIANT		PART DESCRIPTION VENDOR PART NO	AMOUNT
	01	EQ.	01238.	01			$
							$
							$
							$
							$
							$
LOGISTICS APPROVAL		TOTAL MATERIAL COST					$

LABOR ____ HOURS @ $ ____ PER HOUR	$
LABOR ____ HOURS @ $ ____ PER HOUR	$
TOTAL LABOR COSTS	$
TOTAL MATERIAL COST	$
TRAVEL COST	$
	$
	$
	$
SUB TOTAL (ALL SHADED AREAS)	$
TO BE FILLED IN BY BILLING ONLY	
LABOR TAX ____ %	$
MATERIAL TAX ____ %	$
TOTAL	$

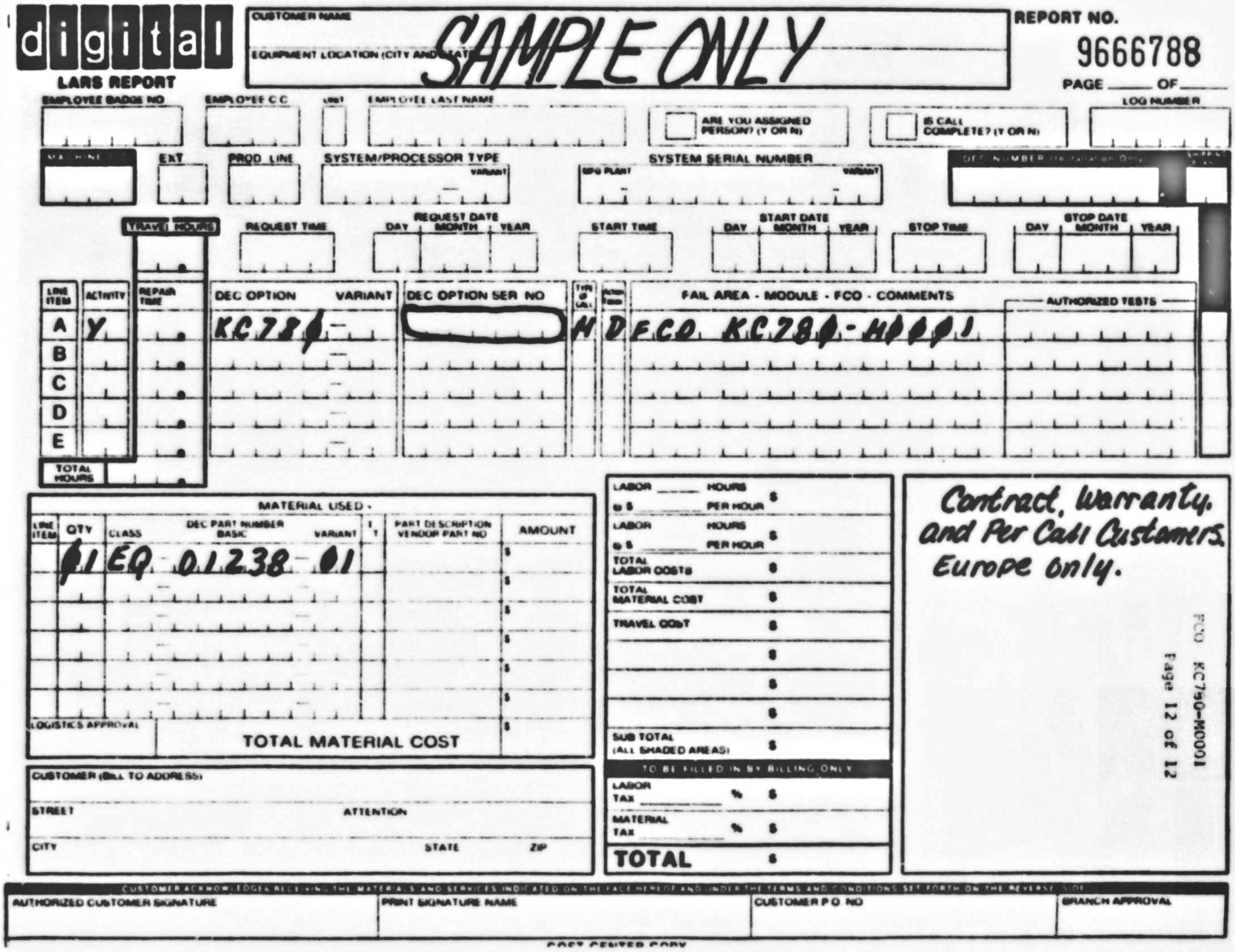
Contract, Warranty, and Per Call Customers. U.S. and G.I.A. only.

FCO KC780-M0001
Page 11 of 12

CUSTOMER (BILL TO ADDRESS)
STREET — ATTENTION
CITY — STATE — ZIP

CUSTOMER ACKNOWLEDGES RECEIVING THE MATERIALS AND SERVICES INDICATED ON THE FACE HEREOF AND UNDER THE TERMS AND CONDITIONS SET FORTH ON THE REVERSE SIDE

AUTHORIZED CUSTOMER SIGNATURE
PRINT SIGNATURE NAME
CUSTOMER P.O. NO
BRANCH APPROVAL



digital
LARS REPORT

CUSTOMER NAME
EQUIPMENT LOCATION (CITY AND STATE)
SAMPLE ONLY

REPORT NO. 9666788
PAGE ____ OF ____

EMPLOYEE BADGE NO | EMPLOYEE C C | UNIT | EMPLOYEE LAST NAME
☐ ARE YOU ASSIGNED PERSON? (Y OR N)
☐ IS CALL COMPLETE? (Y OR N)
LOG NUMBER

MACHINE C C | EXT | PROD LINE | SYSTEM/PROCESSOR TYPE VARIANT | SYSTEM SERIAL NUMBER MFG PLANT VARIANT | DEC NUMBER (Installation Only)

TRAVEL HOURS | REQUEST TIME | REQUEST DATE DAY MONTH YEAR | START TIME | START DATE DAY MONTH YEAR | STOP TIME | STOP DATE DAY MONTH YEAR

LINE ITEM	ACTIVITY	REPAIR TIME	DEC OPTION VARIANT	DEC OPTION SER NO	TYPE OF CALL	ACTION TAKEN	FAIL AREA - MODULE - FCO - COMMENTS	AUTHORIZED TESTS
A	Y		KC780 -		H	D	FCO KC780-M0001	
B								
C								
D								
E								
TOTAL HOURS								

MATERIAL USED

LINE ITEM	QTY	CLASS	DEC PART NUMBER BASIC	VARIANT	I T	PART DESCRIPTION VENDOR PART NO	AMOUNT
	01	EQ	01238	01			$
							$
							$
							$
							$
							$
LOGISTICS APPROVAL		TOTAL MATERIAL COST					$

LABOR ____ HOURS @ $ ____ PER HOUR	$
LABOR ____ HOURS @ $ ____ PER HOUR	$
TOTAL LABOR COSTS	$
TOTAL MATERIAL COST	$
TRAVEL COST	$
	$
	$
	$
SUB TOTAL (ALL SHADED AREAS)	$
TO BE FILLED IN BY BILLING ONLY	
LABOR TAX ____ %	$
MATERIAL TAX ____ %	$
TOTAL	$

Contract, Warranty, and Per Call Customers. Europe only.

FCO KC780-M0001
Page 12 of 12

CUSTOMER (BILL TO ADDRESS)
STREET | ATTENTION
CITY | STATE | ZIP

CUSTOMER ACKNOWLEDGES RECEIVING THE MATERIALS AND SERVICES INDICATED ON THE FACE HEREOF AND UNDER THE TERMS AND CONDITIONS SET FORTH ON THE REVERSE SIDE

AUTHORIZED CUSTOMER SIGNATURE | PRINT SIGNATURE NAME | CUSTOMER P O NO | BRANCH APPROVAL

COST CENTER COPY

TECH. TIPS

29-Dec-1987
KC780-INDEX.B
REV B

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KC780--TT-01	0	20-Jun-78		KC780-RX01 fan motors
-KC780--TT-02	0	24-May-79		How to verify CIB bootstrap ROMS
-KC780--TT-03	0	15-Sep-80		RDC DLV11-E jumpering/modm strapng
-KC780--TT-04	A	15-Sep-82		KC780 floppy disk upgrade
-KC780--TT-05	B	12-Apr-84	328	Correct jumpers for RD DLV11
-KC780--TT-06	A	19-Sep-84	350	Console subsystem memory
-KC780--TT-07	A	7-Jun-85	385	LSI will not enter "ODT"

KC780-TT-1

digital	**FIELD SERVICE TECHNICAL MANUAL**		Option or Designator KC780
12 Bit ☐	16 Bit ☐	18 Bit ☐	32 Bit ☒
36 Bit ☐			

Title KC780 - RX01 FAN MOTORS		Tech Tip Number KC780-TT-1	
Author BILL FREEMAN	F.S. Office TW/A02	Date 6-20-78	Revision 0
Processor Applicability All 11/780	Mgr./Sup. LEE MICKLE	Date 6-20-78	Cross Reference
	Approval:	Date 6-20-78	

SOME VAX 11/780 SYSTEMS HAVE BEEN SHIPPED FROM MANUFACTURING WITH THE RX01 FAN INSTALLED BACKWARDS. THE AIR SHOULD BE PULLED IN THROUGH THE FILTER BELOW THE FLOPPY CASTING, UP INTO THE FLOPPY DRIVE.

CHECK TO INSURE THE FAN IS INSTALLED PROPERLY DURING THE NEXT PREVENTIVE OR CORRECTIVE MAINTENANCE CALL OR IF INTERMITTENT FLOPPY ERRORS OCCUR.

FIELD SERVICE TECHNICAL MANUAL

12 Bit ☐ 16 Bit ☐ 18 Bit ☐ 32 Bit ☒ 36 Bit ☐

Option or Designator KC780

Title	HOW TO VERIFY CIB BOOTSTRAP ROMS		Tech Tip Number KC780-TT-2
Author JERRY NELSON	F.S Office TEWKSBURY	Date 5/24/79	Revision 0
Processor Applicability All | VAX | 11 | 780	Mgr./Sup.	Date 5/24/79	Cross Reference
	Approval	Date	

FOLLOWING IS A LITTLE ROUTINE THAT WILL GENERATE A CHECK SUM FOR THE ROM'S ON THE CIB (M8236) BOARD. THIS ROUTINE CAN BE ENTERED INTO LSI MEMORY FROM THE CONSOLE TERMINAL USING LSI ODT.

```
           1000:    012700                     ;MOV #140000,R0
           1002:    140000
           1004:    005001                     ;CLR R1
1$:        1006:    062001                     ;ADD (R0)+,R1
           1010:    022700                     ;CMP#160000,R0
           1012:    160000
           1014:    001374                     ;BNE 1$
           1016:    000000                     ;HALT
```

AFTER TOGGLING IN THE ABOVE ROUTINE, PERFORM THE FOLLOWING:

```
@ R7/ XXXXXX  1000<CR>        USER TYPES THOSE CHARACTERS
@ P                           THAT ARE UNDERSCORED.
1020
@ R1/ 57357
```

IF THE LSI HALTS AT LOCATION 6 (10 PRINTED ON THE CONSOLE) IT MEANS THAT A REFERENCE TO THE ROM TIMES OUT. R0 THEN CONTAINS THE ADDRESS+2 THAT TIMED OUT. IF THE CONTENTS OF R1 IS NOT EQUAL TO 57357(OCTAL), IT MEANS THAT A BIT(S) IS(ARE) STUCK SOMEWHERE IN THE ROM.

KC780 - TT - 3

Title RDC DLV11-E Jumpering and Modem Strapping			Tech Tip Number KC780-TT-3
Author John Easter	F.S. Office Maynard	Date 15 Sept 80	Revision 0
Processor Applicability All | VAX | | | | | |	Mgr./Sup. Bob Davison	Date 15 Sept 80	Cross Reference
	Approval:	Date	

B.1 GENERAL

One of two types of modems is generally supplied with the KC780-BX Option: General Data Comm (GDC) or Raycal/Vadic. Figures B-1 and B-2 are provided to show GDC modem jumper data and Raycal/Vadic modem jumper and switch settings. *These drawings are provided for information only.* The manufacturer's manual should be referenced before altering jumper or switch settings. All such alterations must be made by a qualified person.

CAUTION

It is an FCC violation to modify, change, or make repairs to the modem unless done by a duly authorized FCC representative.

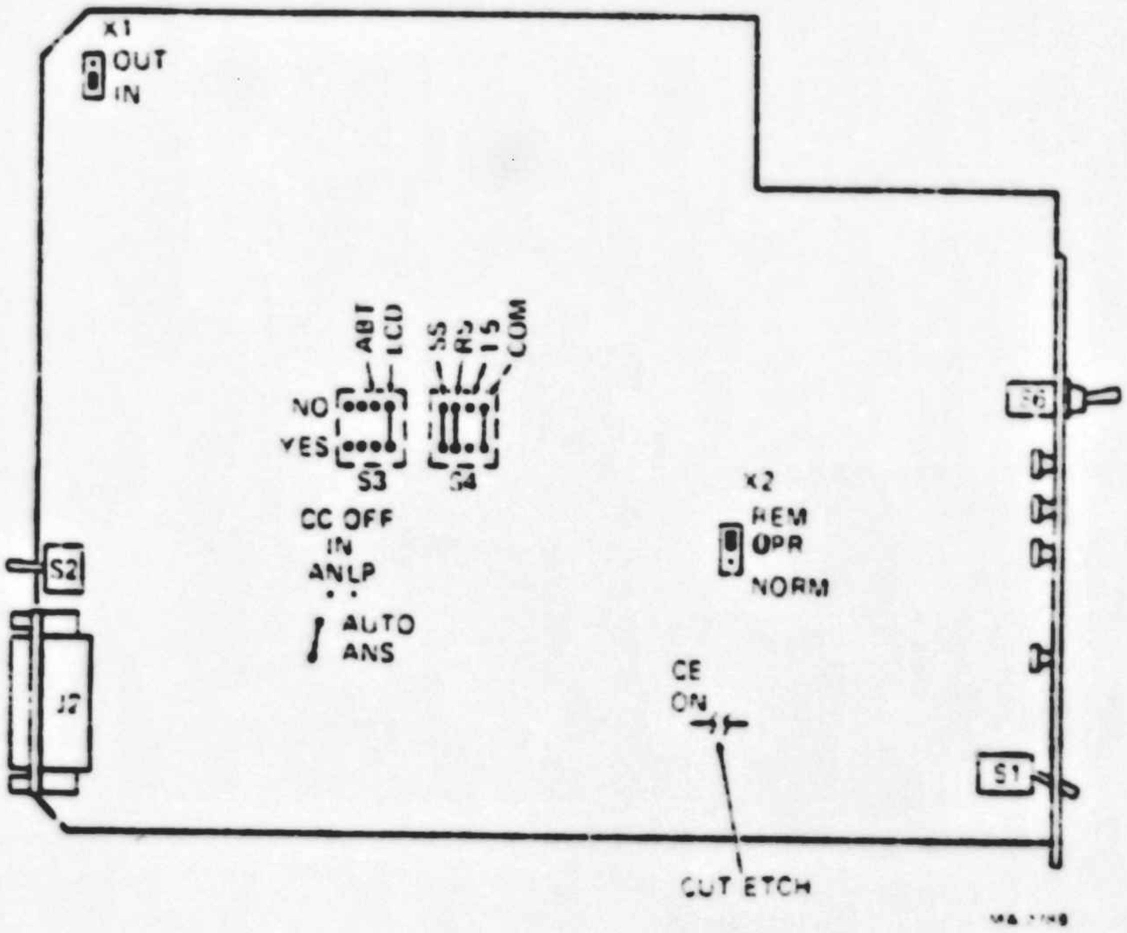


Figure B-1 GDC Jumper Configuration

DEC CONFIDENTIAL This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Organization only.

KC780-TT-4

Title RDC DLV11-E Jumpering and Modem Strapping			Tech Tip Number KC780-TT-3
Author John Easter	F.S. Office Maynard	Date 15 Sept 80	Revision 0
Processor Applicability All VAX	Mgr./Sup. Bob Davison	Date 15 Sept 80	Cross Reference
	Approval	Date	

RAYCAL/VADIC MODEM

OPTION JUMPER	JUMPER CONFIGURATION IN	OUT
A		•
B	•	
C	•	
D		•
E		•
F	•	
G	•	
H	•	

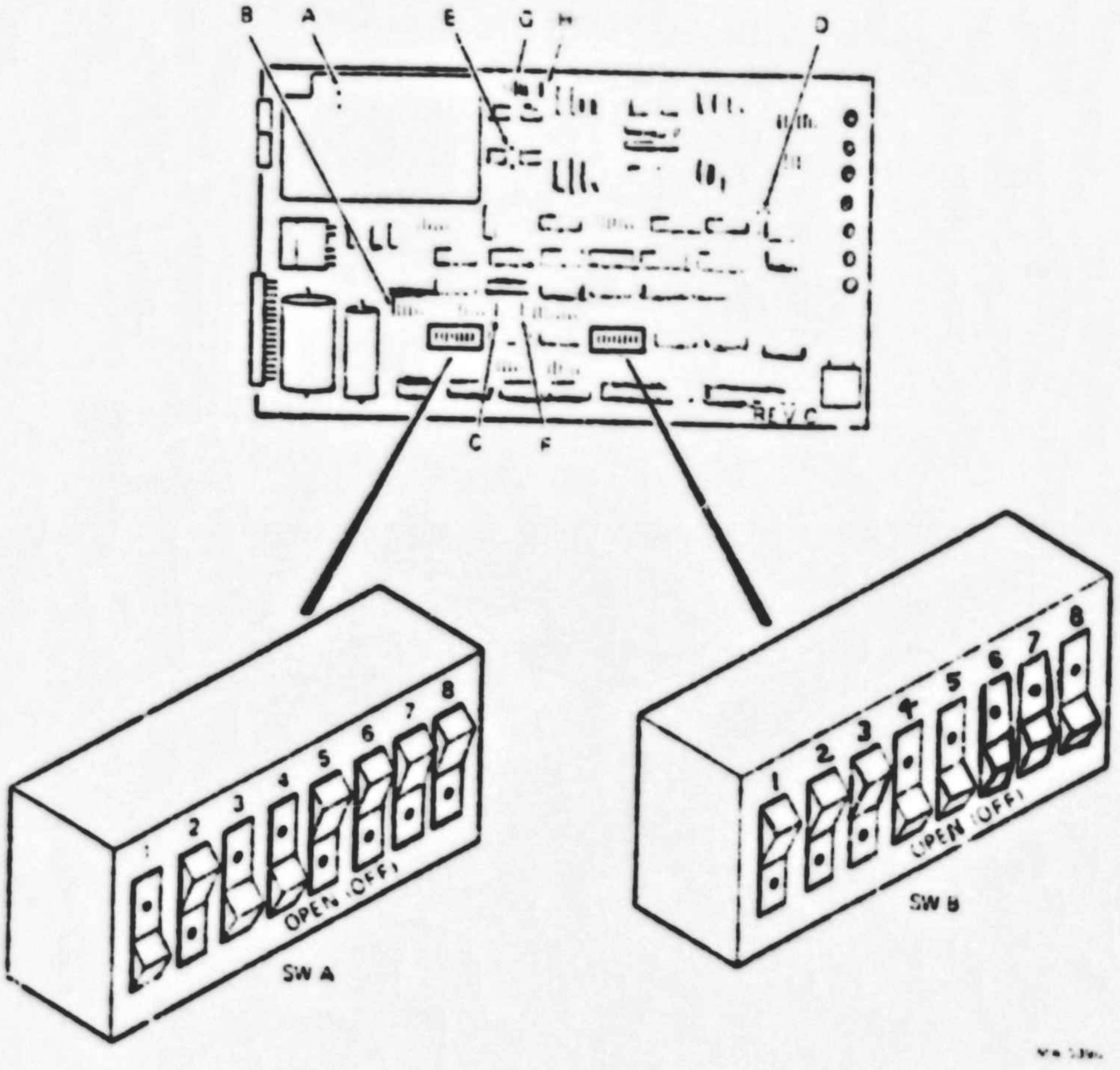


Figure B-2 Raycal/Vadic Jumper Configuration and Switch Settings

DEC CONFIDENTIAL This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Organization only.

KC780-TT-5

digital	**FIELD SERVICE TECH TIP** ☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☒ 32 Bit ☐ 36 Bit	**Option Designator** KC780 **Category** SYSTEMS
Title KC780 FLOPPY DISK UPGRADE		**Tech Tip No.** KC780-TT-4
Processor Applicability 780	**Cross Reference** N/A	**Tech Tip Rev** A **Page** 1 of 1
Author AL LYNN	**Mgr./Supv. Approval** BILL FREEMAN	
Location SO. LAWRENCE	**Mail Stop** VW/C05	**Date** 14 SEP 82
CSSE Approval Bill Freeman BILL FREEMAN		**Date** 15-SEP-82
PSG Approval ERIC HORTON Eric Horton.		**Date**

VAX-11/780 systems shipped since August 1982 have a change to the console sub-system (KC780). The RX01 Floppy Disk Assembly has been replaced by the RX01W. This was due to the RX01 being phased out of Manufacturing and no longer available.

The RX01W consists of a RX02 disk drive assembly set for single density mode and the standard RX02 controller modules M7744-YC and M7745-YA. Physical mounting and the RXV11 Interface Module are not effected. Parts between the RX01 and the RX01W are not compatible, which could cause an inconvenience in the field in knowing beforehand what spare parts to take on a floppy disk problem. The only way to identify this new assembly without opening the unit, is by checking the Model/Serial Number Tag located underneath the pivot bracket. You will either have to lie on the floor or use a mirror to read the tag.

RX02 single density mode is selected by switches on the M7744-YC module. The correct settings are S1-1 ON, S1-2 OFF.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

Page Number 4	**Page Revision** A	**Publication Date** SEPTEMBER 1982

EN-01584-12-0000(7/80)

KC780-TT-6

digital	**FIELD SERVICE TECH TIP** ☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☒ 32 Bit ☐ 36 Bit	**Option Designator** KC780 **Category** SYSTEM
Title CORRECT JUMPERS FOR THE RD DLV11		**Tech Tip No.** KC780-TT-5
Processor Applicability V A X 1 1 7 8 0	**Cross Reference** N/A	**Tech Tip Rev** B — **Page** 1 of 3
Author Jerry Harrigan	**Mgr./Supv. Approval**	
Location Lawrence, Ma	**Mail Stop** VWO/C05	**Date** March 28, 1984
CSSE Approval Jim Powers		**Date** 4/12/84
FSPSG APPROVAL		**Date**

AN ERROR WAS MADE WITH TECHTIP KC780-TT-5. THE CORRECT JUMPER CONFIGURATION IS:

DESCRIPTION	INSTALLED	REMOVED
RECEIVE BAUD RATE (300)	R1,R3	R0,R2
RECEIVE BAUD RATE (1200) WITH DF03 MODEM	R3	R0,R1,R2
TRANSMIT BAUD RATE (300)	T1,T3	T0,T2
TRANSMIT BAUD RATE (1200) WITH DF03 MODEM	T3	T0,T1,T2
DISABLE BREAK GENERATION		BG
OPERATION WITHOUT PARITY PARITY TYPE - DOES		P
NOT APPLY WHEN "P" IS REMOVED		-E
OPERATION WITH 8 DATA BITS/CHARACTER		1,2
PROGRAMMABLE BAUD RATE FUNCTION DISABLED		PB
SPLIT SPEED OPERATION DISABLED		S,S1

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

Page Number 5A	**Page Revision** A	**Publication Date** APRIL 1984

EN-01586-12-REVA(700)

KC780-TT-7

digital

FIELD SERVICE TECH TIP

Continuation Sheet

Option Designator KC780

Category SYSTEM

Title CORRECT JUMPERS FOR THE RD DLV11

Tech Tip No. KC780-TT-5

Processor Applicability V A X 1 1 7 8 0

Cross Reference N/A

Tech Tip Rev B

Page 2 of 3

(CONTINUED)

DESCRIPTION	INSTALLED	REMOVED
COMMON SPEED OPERATION ENABLED	C,C1	
HALT ON FRAMING ERROR DISABLED		H
BOOT ON FRAMING ERROR DISABLE	-B	B
DATA TERMINAL READY IS NOT FORCED TRUE	-FD	
REQUEST TO SEND IS NOT FORCED TRUE	-FR	
REQUEST TO SEND ENABLED	RS	
FORCE BUSY IS DISABLED		FB
FACTORY TEST JUMPERS - M NOT ON [illegible]017-AA		M,M1
MAINTENANCE JUMPERS DISABLED		M2,M3
UART CLEAR SIGNAL ENABLE	INIT	DCOK
DEVICE ADDRESS BITS 3-12 (17756X)	A3,A7,A8 A9,A11,A12	A4,A5,A6, A10
VECTOR ADDRESS BITS 3-8 (310)	V3,V6,V7	V4,V5,V8
DATA SET READY DISABLE WITH US CONSOL.SYS	SD TO SD1	SD1 TO DS
DATA SET READY DISABLE WITH EURPEAN CONSOL.SYS	SD1 TO DS	SD TO SD1

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2

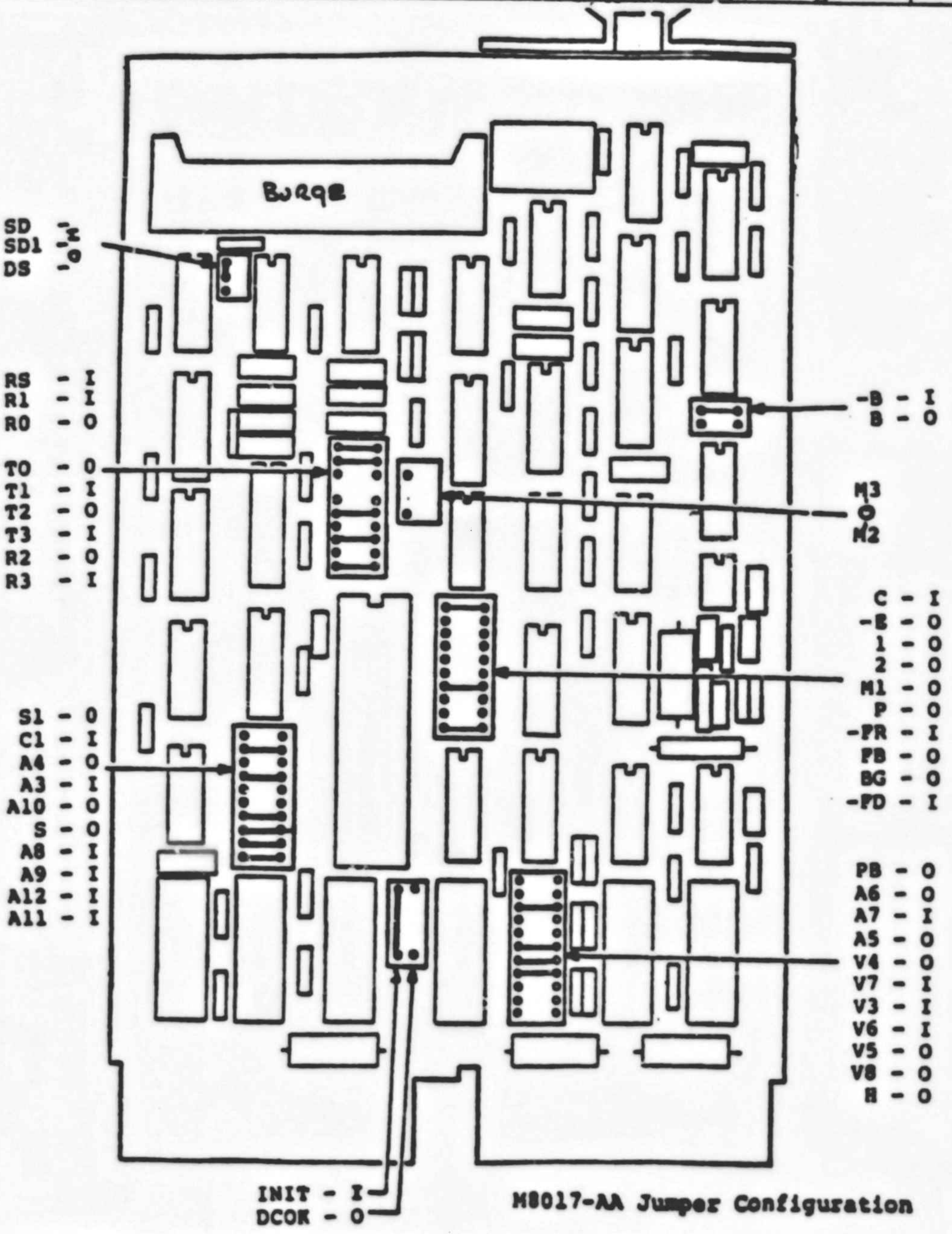
KC780-TT-8

digital	FIELD SERVICE TECH TIP Continuation Sheet	Option Designator KC780 Category SYSTEM

Title
CORRECT JUMPERS FOR THE RD DLV11

Tech Tip No.
KC780-TT-5

Processor Applicability	Cross Reference	Tech Tip Rev	Page
V A X 1 1 7 8 0	N/A	B	3 of 3


Burqe
SD -
I
SD1 -
O
DS -
RS - I
R1 - I
R0 - O
T0 - 0
T1 - I
T2 - O
T3 - I
R2 - O
R3 - I
S1 - 0
C1 - I
A4 - O
A3 - I
A10 - O
S - O
A8 - I
A9 - I
A12 - I
A11 - I
-B - I
B - O
M3
O
M2
C - I
-E - O
1 - O
2 - O
M1 - O
P - O
-FR - I
FB - O
BG - O
-FD - I
PB - O
A6 - O
A7 - I
A5 - O
V4 - O
V7 - I
V3 - I
V6 - I
V5 - O
V8 - O
H - O
INIT - I
DCOK - O

M8017-AA Jumper Configuration

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2

Page Number	Page Revision	Publication Date
5C	A	APRIL 1984

EN-01888-12-REV A(700)

KC784-TT-9

digital	**FIELD SERVICE TECH TIP**		**Option Designator** KC780
	☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☒ 32 Bit ☐ 36 Bit		**Category** COMPUTERS
Title CONSOLE SUBSYSTEM MEMORY			**Tech Tip No.** KC780-TT-06
Processor Applicability V A X 1 1 7 8 0	**Cross Reference** KC785-TT-01 VAX 11/785-TT-03	**Tech Tip Rev** A	**Page** 1 of 3
Author John Stevens	**Mgr./Supv. Approval**		
Location So. Lawrence	**Mail Stop** VWO/C05		**Date** 18 SEP 84
CSSE Approval			**Date** 9/19/84
FSPSG Approval			**Date**

The availability of 4K MOS RAM chips used on several memory modules and on the 1103 used as the console subsystem for the VAX 11/780 and 11/785 has become a problem. The chip is no longer being manufactured. Therefore, the KC780 and the KC785 will be using an MSV11-DE option, a 48KByte memory, in the console subsystem.

The KC785 will be shipped with the new memory and a KD11-H console CPU.

The KC780 started shipping with the new memory and a KD11-H in May 1984.

Should an older VAX 11/780 have console memory problems the following should be done.

1. Order from Stock Room 17 an M8044-E module (the MSV11-DE option).

2. Modify the KD11-F so that it becomes a YA variant by following the rework procedures below. Refer to the following two diagrams for the location of the KD11-F and its jumper locations.

    1. remove W2 and W11

    2. install W4

    3. install W9

   In effect this disables the on-board 4K Memory and the refresh signals and enables the selection of memory banks off-board.

3. Set up the M8044-E switch pack so that all switches are open, causing the starting address to be 0.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KC80 - TT - 10

digital	**FIELD SERVICE TECH TIP**	**Option Designator** KC780
	Continuation Sheet	**Category** COMPUTERS
Title CONSOLE SUBSYSTEM MEMORY		**Tech Tip No.** KC780-TT-06
Processor Applicability V A X 1 1 7 8 0	**Cross Reference** KC785-TT-01 VAX 11/785-TT-03	**Tech Tip Rev** A — **Page** 2 of 3

1	M7264 LSI-11 CPU MODULE				1
2	M7946		M7940		2
3	M7944		M9400-YE		3
4					4
	A	B	C	D	

(A) BEFORE MEMORY MODULE INSTALLATION

1	M7264-YA LSI-11 CPU MODULE				1
2	M7946		M7940		2
3	M8044-EA		M9400-YE		3
4					4
	A	B	C	D	

(B) AFTER MEMORY MODULE INSTALLATION

1	M7264-YA LSI-11 CPU MODULE				1
2	M7946		M7940		2
3	M8044-EA		M8017-AA		3
4			M9400-YE		4
	A	B	C	D	

(C) AFTER MEMORY MODULE INSTALLATION AND WITH REMOTE DIAGNOSIS

MKV84-1070

LSI-11 Module Placement

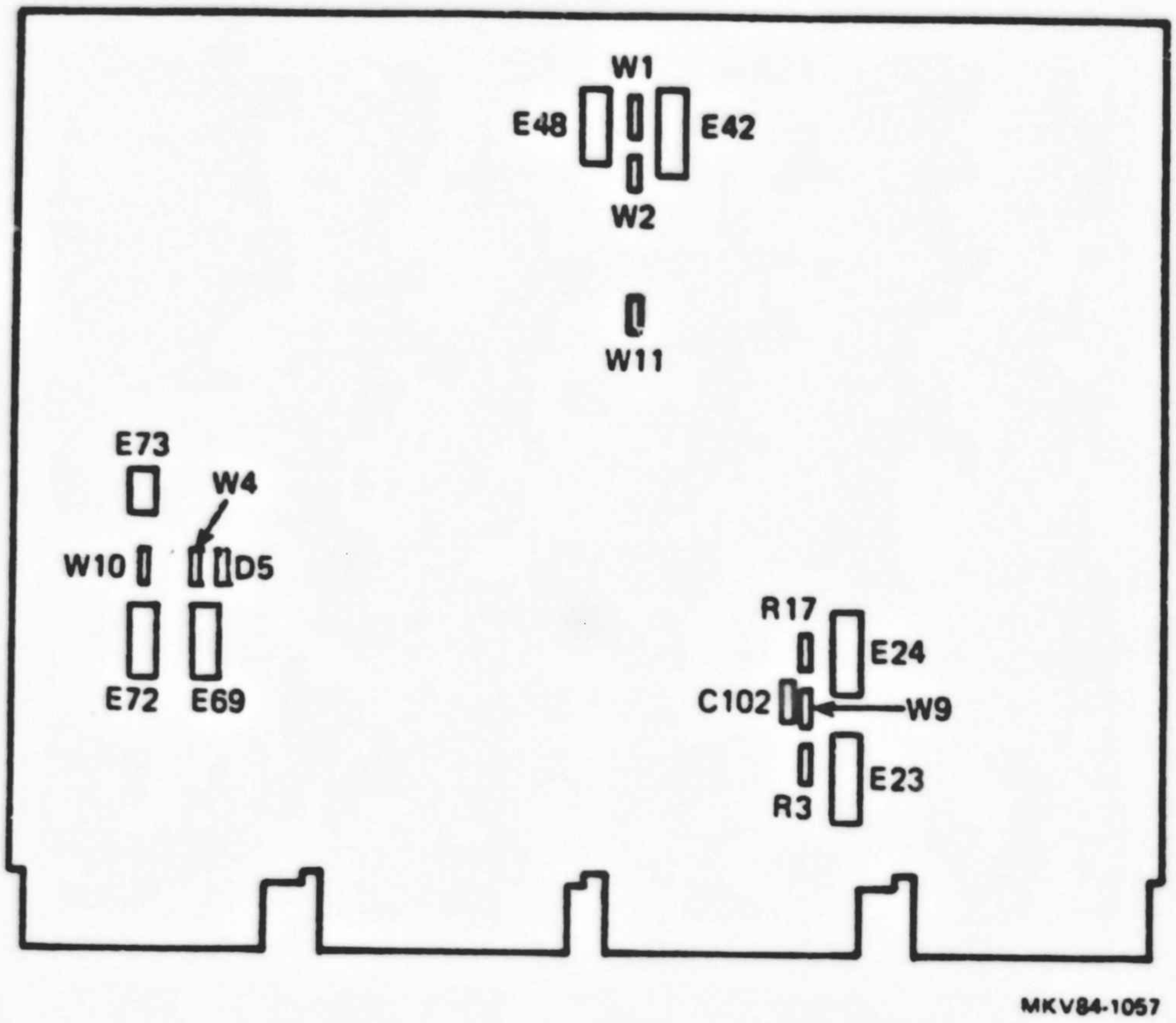
FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2

Page Number	Page Revision	Publication Date
7	A	SEPTEMBER 1984

EN-01588-12-REV A(700)

KC780-TT-11

digital	FIELD SERVICE TECH TIP Continuation Sheet	Option Designator KC780 Category COMPUTERS
Title CONSOLE SUBSYSTEM MEMORY		Tech Tip No. KC780-TT-06
Processor Applicability V A X 1 1 7 8 0	Cross Reference KC785-TT-01 VAX 11/785-TT-03	Tech Tip Rev A · Page 3 of 3


W1
E48
E42
W2
W11
E73
W4
W10
D5
E72
E69
R17
E24
C102
W9
R3
E23
MKV84-1057

M7264 Jumper Locations

For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2

KC780 - TT - 12

digital	**FIELD SERVICE TECH TIP**					**Option Designator** KC780
	☐ 12 Bit	☐ 16 Bit	☐ 18 Bit	☒ 32 Bit	☐ 36 Bit	**Category** Systems
Title LSI Will Not Enter "ODT"						**Tech Tip No.** KC780-TT-07
Processor Applicability V A X 1 1 7 8 0		**Cross Reference** KC785-TT-02				**Tech Tip Rev** A
						Page 1 of 1
Author Jerry Harrigan			**Mgr./Supv. Approval**			
Location SO. Lawrence		**Mail Stop** VWO/C05				**Date** 7 JUN 85
CSSE Approval James Powers						**Date** 6/7/85
FSPSG Approval						**Date**

TITLE - LSI (11/03) WILL NOT ENTER ODT OR LOAD THE CONSOLE WHEN TOGGLING THE "DC ON/OFF" SWITCH

PROBLEM/SYMPTOM:

When toggling the "DC ON/OFF" switch on the LSI (11/03) the LSI will not enter "ODT" or load the WCS and console, but will "Hang". The only way to clear the "Hang" is to power down the complete system using the key switch on the System Control Panel.

STATUS:

The problem is a failing IC on the M7264-YC (LSI). This IC is manufactured by Western Digital and has been out of production for some time now. The problem with the IC is that they have been sitting on a shelf for a long time and are having shelf-life failures. Western Digital is starting to manufacture these IC and should be relieve the problem.

SUGGESTED ACTION:

The only work around for this problem at the present time is to order a new module (M7264-YC). Until the MRC has turned on the test procedure to verify that the module does not failure, there is no-way of knowing if the new module will fail the same way.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KC780-TT-13

KC785

TECH. TIPS

21-Aug-1987
KC785-INDEX.A
REV A

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KC785--TT-01	A	19-Sep-84	350	Console subsystem memory
-KC785--TT-02	A	7-Jun-85	385	LSI will not enter "ODT"

KC785-TT-1

digital	**FIELD SERVICE TECH TIP** ☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☒ 32 Bit ☐ 36 Bit	**Option Designator** KC785 **Category** COMPUTERS
Title CONSOLE SUBSYSTEM MEMORY		**Tech Tip No.** KC785-TT-01
Processor Applicability V A X 1 1 7 8 0	**Cross Reference** KC780-TT-06 VAX 11/785 -TT-03	**Tech Tip Rev** A — **Page** 1 of 3
Author John Stevens	**Mgr./Supv. Approval**	
Location So. Lawrence	**Mail Stop** VWO/C05	**Date** 18 SEP 84
CSSE Approval Jim Powers		**Date** 9/19/84
FSPSO Approval		**Date**

The availability of 4K MOS RAM chips used on several memory modules and on the 1103 used as the console subsystem for the VAX 11/780 and 11/785 has become a problem. The chip is no longer being manufactured. Therefore, the KC780 and the KC785 will be using an MSV11-DE option, a 48KByte memory, in the console subsystem.

The KC785 will be shipped with the new memory and a KD11-H console CPU.

The KC780 started shipping with the new memory and a KD11-H in May 1984.

Should an older VAX 11/780 have console memory problems the following should be done.

1. Order from Stock Room 17 an M8044-E module (the MSV11-DE option).

2. Modify the KD11-F so that it becomes a YA variant by following the rework procedures below. Refer to the following two diagrams for the location of the KD11-F and its jumper locations.

    1. remove W2 and W11

    2. install W4

    3. install W9

   In effect this disables the on-board 4K Memory and the refresh signals and enables the selection of memory banks off-board.

3. Set up the M8044-E switch pack so that all switches are open, causing the starting address to be 0.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KC785 - TT-2

digital	**FIELD SERVICE TECH TIP** **Continuation Sheet**	**Option Designator** KC785 **Category** COMPUTERS
Title CONSOLE SUBSYSTEM MEMORY		**Tech Tip No.** KC785-TT-01
Processor Applicability V A X 1 1 7 8 0	**Cross Reference** KC780-TT-06 VAX 11/785-TT-03	**Tech Tip Rev** A — **Page** 2 of 3

1	M7264 LSI-11 CPU MODULE				1
2	M7946		M7940		2
3	M7944		M9400-YE		3
4					4
	A	B	C	D	

(A) BEFORE MEMORY MODULE INSTALLATION

1	M7264-YA LSI-11 CPU MODULE				1
2	M7946		M7940		2
3	M8044-EA		M9400-YE		3
4					4
	A	B	C	D	

(B) AFTER MEMORY MODULE INSTALLATION

1	M7264-YA LSI-11 CPU MODULE				1
2	M7946		M7940		2
3	M8044-EA		M8017-AA		3
4			M9400-YE		4
	A	B	C	D	

(C) AFTER MEMORY MODULE INSTALLATION AND WITH REMOTE DIAGNOSIS

MKV84-1070

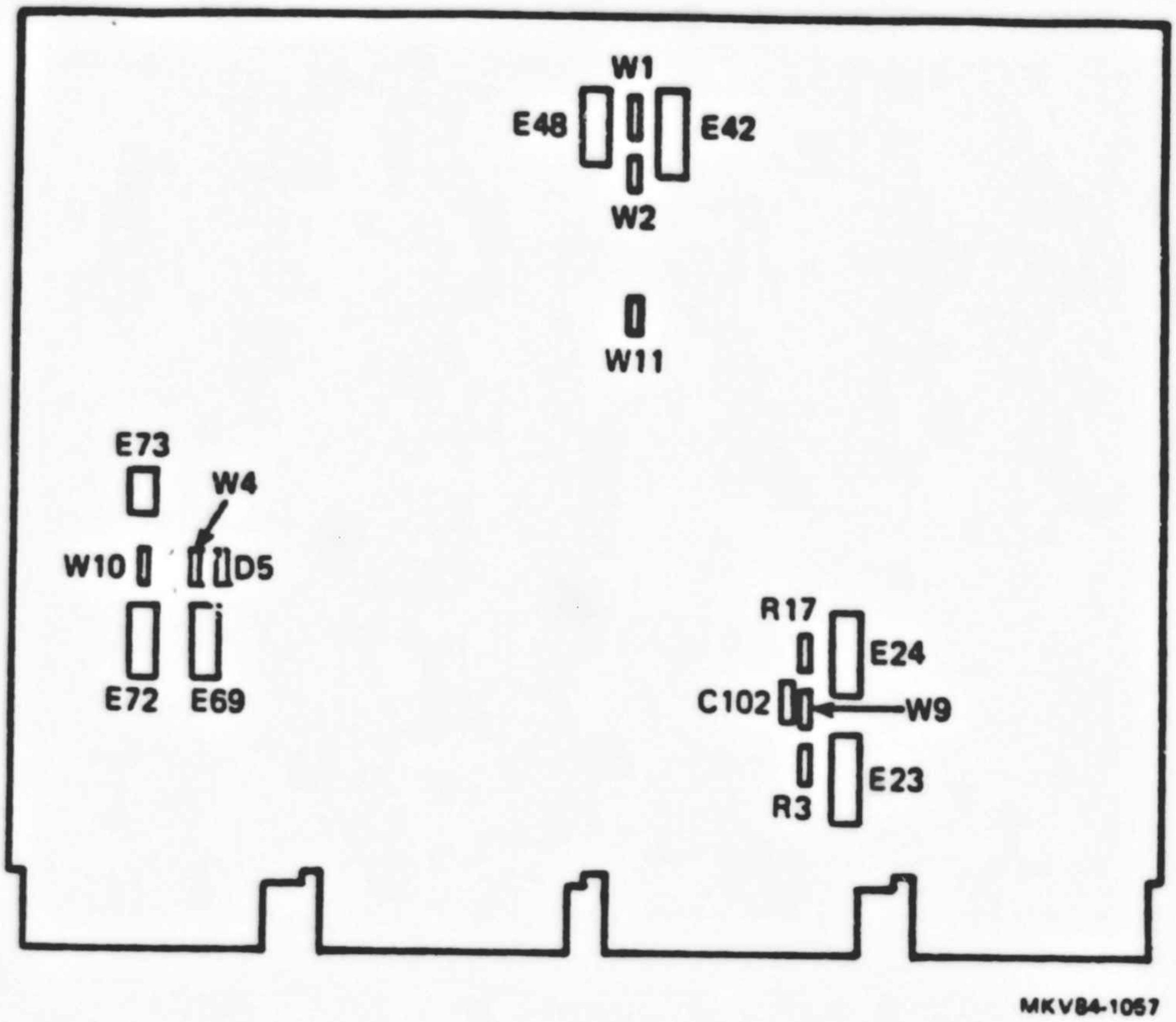
LSI-11 Module Placement

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2

Page Number 2	**Page Revision** A	**Publication Date** SEPTEMBER 1984

KC785 - TT-3

digital	**FIELD SERVICE TECH TIP**	**Option Designator** KC785
	Continuation Sheet	**Category** COMPUTERS
Title CONSOLE SUBSYSTEM MEMORY		**Tech Tip No.** KC785-TT-01
Processor Applicability V A X 1 1 7 8 0	**Cross Reference** KC780-TT-06 VAX 11/785 -TT-03	**Tech Tip Rev** A / **Page** 3 of 3


W1
E48
E42
W2
W11
E73
W4
W10
D5
E72
E69
R17
E24
C102
W9
E23
R3
MKV84-1057

M7264 Jumper Locations

For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2

Page Number	**Page Revision**	**Publication Date**
3	A	SEPTEMBER 1984

digital	**FIELD SERVICE TECH TIP**		**Option Designator** KC785	
	☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☒ 32 Bit ☐ 36 Bit		**Category** Systems	
Title LSI Will Not Enter "ODT"			**Tech Tip No.** KC785-TT-02	
Processor Applicability V | A | X | 1 | 1 | 7 | 8 | 5	**Cross Reference** KC780-TT-07		**Tech Tip Rev** A	**Page** 1 of 1
Author Jerry Harrigan		**Mgr./Supv. Approval**		
Location So. Lawrence	**Mail Stop** VWO/C05		**Date** 7 JUN 85	
CSSE Approval			**Date** 6/8/85	
FSPSG Approval			**Date**	

TITLE - LSI (11/03) WILL NOT ENTER ODT OR LOAD THE CONSOLE WHEN TOGGLING THE "DC ON/OFF" SWITCH

PROBLEM/SYMPTOM:

When toggling the "DC ON/OFF" switch on the LSI (11/03) the LSI will not enter "ODT" or load the WCS and console, but will "Hang". The only way to clear the "Hang" is to power down the complete system using the key switch on the System Control Panel.

STATUS:

The problem is a failing IC on the M7264-YC (LSI). This IC is manufactured by Western Digital and has been out of production for some time now. The problem with the IC is that they have been sitting on a shelf for a long time and are having shelf-life failures. Western Digital is starting to manufacture these IC and should be relieve the problem.

SUGGESTED ACTION:

The only work around for this problem at the present time is to order a new module (M7264-YC). Until the MRC has turned on the test procedure to verify that the module does not failure, there is no-way of knowing if the new module will fail the same way.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KC785 - TT - 5

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

KCT32

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

TECH. TIPS

21-Aug-1987
KCT32-INDEX.A
REV A

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KCT32--TT-01	A	9-Sep-85	398	KCT32 Manual Errors
-KCT32--TT-02	A	6-May-86	430	Explanation of jumpers
-KCT32--TT-03	A	6-Nov-86	457	KCT32 UETP procedures

KCT32-TT 1

digital	**FIELD SERVICE TECH TIP** ☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☐ 32 Bit ☐ 36 Bit	**Option Designator** KCT32 **Category** COMMUNICATIONS
Title KCT32 Manual Errors		**Tech Tip No.** KCT32-TT-01
Processor Applicability VAX	**Cross Reference** N/A	**Tech Tip Rev** A · **Page** 1 of 1
Author Maurice Williams	**Mgr./Supv. Approval** Tom Lowery	
Location HZO	**Mail Stop** HZO	**Date** September 9, 1985
CSSE Approval Maurice J Williams		**Date**
FSPSG APPROVAL		**Date**

PROBLEM: Errors in manuals and PSG

KCT32 Pocket Service Guide (EK-KCT32-PS) PG. 22, FIG. 3-1
KCT32 Technical Manual (EK-KCT32-TM) PG. 2-4, FIG. 2-1
KCT32 Installation Manual (EK-KCT32-IN) PG. 2-4, FIG. 2-1

ERROR:

Vector address switches in the chart read S7 thru S1 (left to right). This is backwards.

Should read S1 thru S7 (left to right)

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

Page Number	**Page Revision**	**Publication Date**
1	A	SEPTEMBER 1985

KCT32 - TT - 2

Field Service TECH TIP

digital™

Page 1 of 1

Category Systems
Rev A
Title Explanation of Jumpers
Option KCT32
Cross Reference N/A
TECH TIP No. KCT32-TT-02

Problem/Solution

PROBLEM:

The KCT manuals states that there are no jumpers on the M7487 module while there are actually six of them. The following is an explanation of these jumpers:

W1+W3	These jumpers enable the modem signal DSR- (CCITT V.24 circuit number 107b). This circuit is not normally supported by V.24 and therfore not normally supported by the KCT, but if needed, this signal can be enabled by installing these jumpers.
W2+W4	These jumpers enable the modem signal SPDMI (CCITT V.24 circuit number 112) Data Signal Rate Detector. This circuit is not normally supported by the KCT, so these jumpers are normally removed, but if needed, this signal can be enabled by installing these jumpers.
W5+W6	These jumpers enable a KCT specific bit that was designed as signal for a MIL STD-188-114 converter board that, as of now, has not been designed. This signal is unused and therefore, the jumpers should be removed.

Approvals

Author Maurice Williams	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE Maurice Williams Maurice Williams
Author's Manager Phil Dudziak		Field Service Product Safety
Release Date May 6, 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation.
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

KCT32-TT-3

Field Service TECH TIP

digital™

Page 1 of 3

Category Systems

Rev A

Title KCT32 UETP PROCEDURES

Option KCT32

Cross Reference N/A

TECH TIP No. KCT32-TT-03

Problem/Solution

PROBLEM:

Due to undocumented changes in the VMS UETP interface with the VMS V4.3, the procedures for running the KCT32 UETP have changed. The KCT32 Installation Manual does not fully specify all the steps necessary for running the VMS UETP for KCT32.

SOLUTION:

Please run the KCT UETP using the following procedure:

1) Login to VMS under the SYSTEST account.

2) Confirm that the device driver for the KCT32 is correctly loaded by doing a

```
SHOW DEVICE UK
```

If the device driver is not loaded, then VMS will respond with:

```
%SYSTEM-W-NOSUCHDEV, no such device available
```

In this case, load the driver by invoking the KCT32 device driver startup procedure -- @SYS$MANAGER:UKSTARTUP.COM. This assumes that UKSTARTUP.COM has been previously edited to correspond to the CSR(s) and VECTOR(s) of the KCT32(s) on your system.

Approvals

Author Herb Goodrich Herb Goodrich	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE Maurice Williams Maurice Williams
Author's Manager Ray Harrington 12 Nov 86 Ray Harrington		Field Service Product Safety
Release Date 6 November, 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation.
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

EN 01584-12 REV (5/84)

KCT32-TT-4

Field Service **TECH TIP**

digital™

Page 2 of 3

Category Systems Rev A

Title KCT32 UETP Procedures

Option KCT32

TECH TIP No. KCT32-TT-03

3) Confirm that UETP test files for KCT32 exist in the SYSTEST directory:

```
SYS$TEST:UETKCT300.EXE  (executable image of KCT32 UETP)
SYS$TEST:UETKCT300.MIC  (microcode image which is loaded
                          into KCT32)
```

(NOTE: If these files are not in your SYS$TEST: directory or if your UKSTARTUP.COM procedure is missing from SYS$MANAGER:, it is likely that your KCT32 software installation was not performed correctly and needs to be repeated.)

4) Edit the file UETSUPDEV.DAT in SYS$TEST: to include:

```
20 15 UETKCT300.EXE   !KCT32
```

5) Update the file SYS$TEST:UETINIDEV.DAT to include reference to the KCT as follows:

Invoke UETP by `@SYS$TEST:UETP`

specify DEVICE for PHASE, and run the test for one (1) pass.

The initialization phase of this run of the UETP will create a file UETINIDEV.DAT with records describing each of the devices on the system. The following three lines will exist for each KCT32 controller in your system (where "X" indicates the controller in question).

```
DDB N UKX
UCB N 00000
UCB N 00001
```

The "N" character in the center of each record indicates that the UETP found the KCT32 device to be not testable. This is to be expected as the KCT32 must be loaded with microcode before the two lines can be accessed.

Edit UETINIDEV.DAT to change the "N" to "T" for all lines pertaining to the KCT32. This marks the device as being "testable".

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation.
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

KCT32-TT-5

Field Service TECH TIP

digital™

Page 3 of 3

Category Systems
Rev A
Title KCT32 UETP Procedures
Option KCT32
TECH TIP No. KCT32-TT-03

(Note: It is possible to create a UETINIDEV.DAT file by invoking SYS$TEST:UETINIT01.EXE directly. However, it was found that a UETINIDEV.DAT file created in this manner contains NO reference to the KCT32 at all.)

6) DEFINE CTRLNAME UKA

(Repeat the test with other definitions for the CTRLNAME logical name if you wish to test other KCT32 controllers in your system).

7) Run the UETP for KCT32 by itself:

```
RUN UETKCT300
```

The UETP should complete without any error messages in about 5 minutes. Check the error log file for any errors pertaining to the KCT32.

8) The KCT32 UETP will NOT run successfully with the VMS UETP (@SYS$TEST:UETP) because the initialization phase always marks the KCT as being non-testable.

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation.
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

KCT32-TT-6

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

KD32

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

TECH. TIPS

29-Dec-1987
KD32-INDEX.B
REV B

MICROMEDIA PUBLISHING

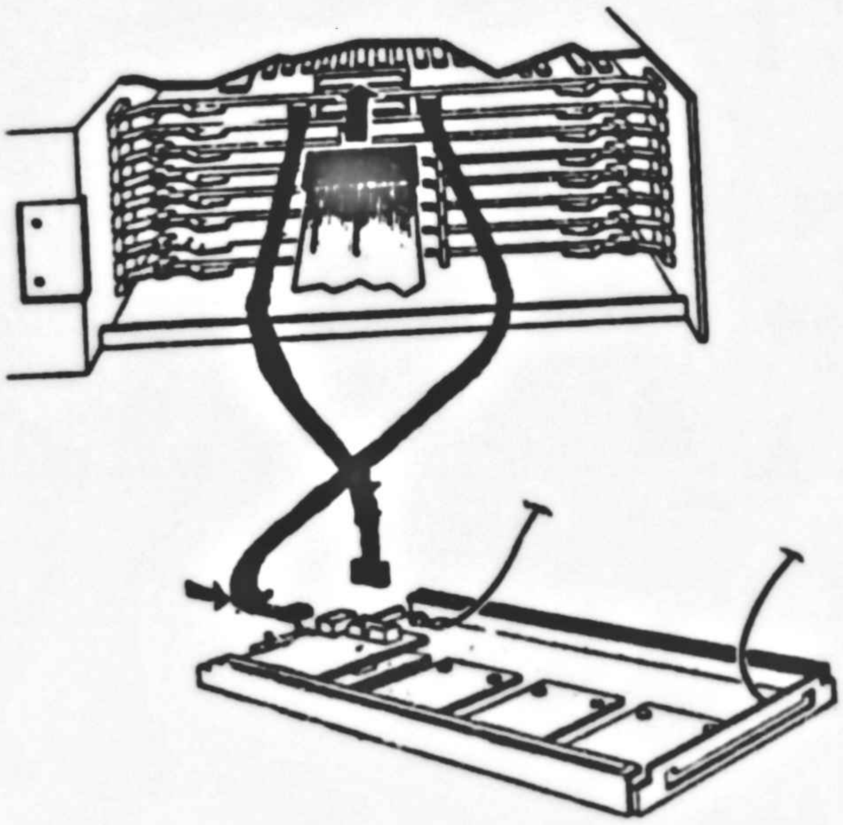
Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KD32--TT-01	A	30-Sep-85	401	UVAX I patch panel cabling

KD32-TT-1

digital	**FIELD SERVICE TECH TIP**					**Option Designator** KD32
	☐ 12 Bit	☐ 16 Bit	☐ 18 Bit	☒ 32 Bit	☐ 36 Bit	**Category** SYSTEMS
Title uVAX I Patch Panel Cabling						**Tech Tip No.** KD32-TT-01
Processor Applicability M | I | C | R | O | V | A | X	**Cross Reference** N/A					**Tech Tip Rev** A / **Page** 1 of 1
Author Tom Rasmussen			**Mgr./Supv. Approval** Robert Corrigan			
Location GBO	**Mail Stop** GBO					**Date** Sept. 26, 1985
CSSE Approval						**Date**
PSG Approval LEE SOBERG						**Date** Sept. 30, 1985

The documentation for the Micro-Vax 1 does not give a good indication of how the cables on the Data Path (DAP) board are connected to the Patch Panel. In fact, one of the illustrations in the Owners Manual makes it look cabled in wrong. Both ends of each cable are keyed and it is impossible to get the ends reversed at the patch panel end, but the ends are identical for the 2 connectors to the DAP board. For the correct cabling, see the illustration below and remember that the cables should be crossed.



FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

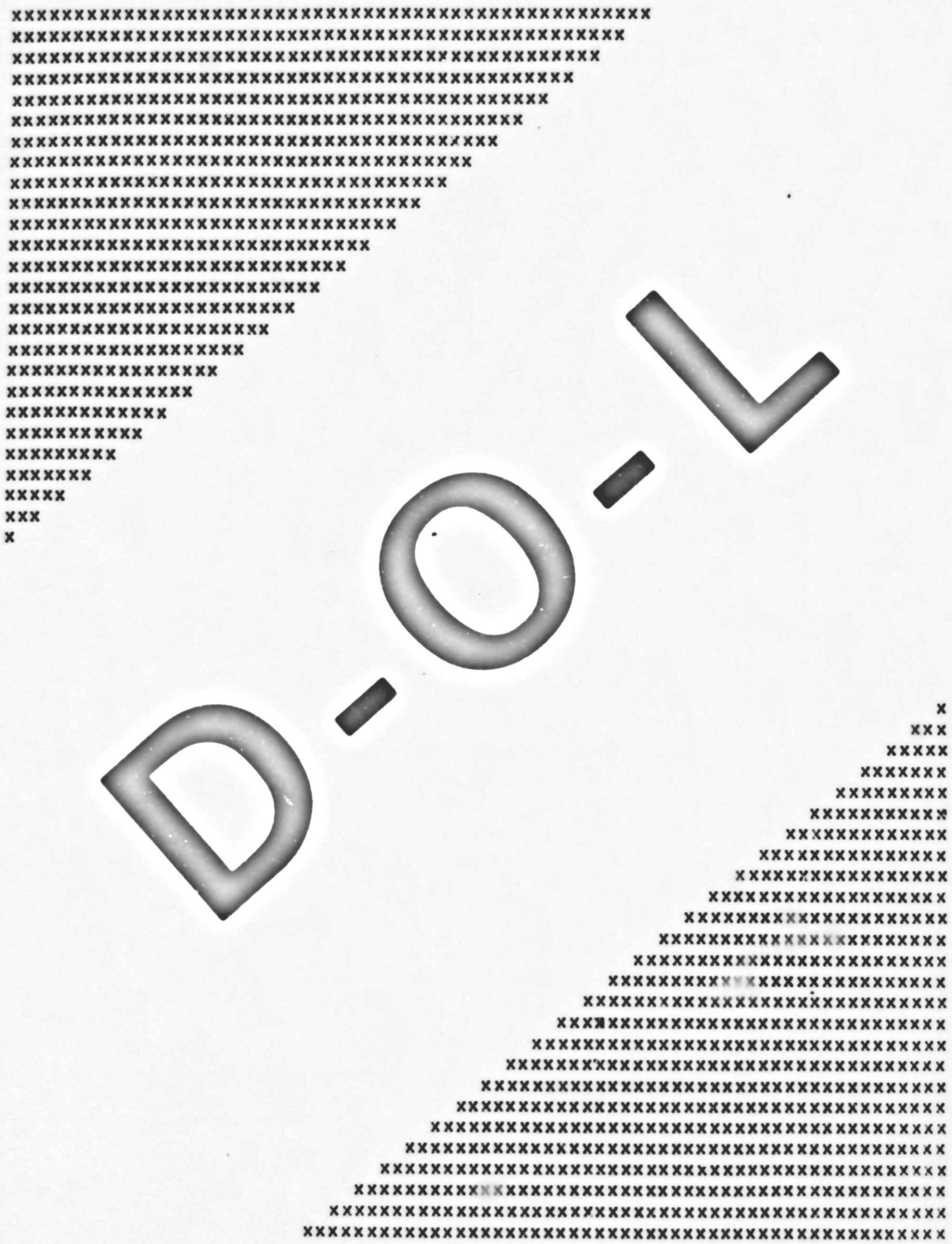
Page Number 1	**Page Revision** A	**Publication Date** OCTOBER 1985

KD32 - TT - 2

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

KDB50

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```


D-O-L

FCO FIELD CHANGE ORDER LOG digital **KDB50**

DEC-O-LOG

Disk

LIBRARY TYPE

VAX

KDB50-R001 CODE: F

MAR 87 - PROBLEM: I. This problem exists only on a read of the disk, of either eight or twelve bytes. The KDB50 will overwrite the two bytes of data following the buffer area. II. When crossing the 64K boundary, the controller fails to increment the upper 16 bits of addressing, thus writing incorrect data to the disk. III. When the KDB50 completes a data transfer after crossing a 64K boundary, the address of the last word gets written to its 64K address lower than it should have been.

FIELD EFFECTIVITY: All VAXBI systems using the KDB50 DSA disk controller. This FCO incorporates ECO's T1002-CX008, T1002-CX009 and T1002-CX010.

QUICK CHECK: Part number on PROM at E97, 23-127F6-00. If PROM 23-127F6-00 is already installed in socket E97 on the KDB50 microprocessor module, then this FCO does not need to be performed.

This revised FCO supersedes the original release dated 28 October 1986. It has been revised to correct part Rev identification to the T1002 module.

The DEC on-site labor charge will be the time required to install and test the FCO at the then current hourly rate.

FCO KIT ORDERING:

EQ-01429-01 FCO. PARTS
FA-04714-01 FCO only

Copyright © 1987 by Digital Equipment Corporation
Printed in U.S.A.

KDB50-D-OL-1

FCO's

9-Mar-1987
KDB50-INDEX.B
REV B

MICROMEDIA PUBLISHING

Field Change Order Index

FCO Number	FA REV	Rel. Date	SB#	Problem
-KDB50---R001	B	6-Mar-87	471	Byte Overwrite/Controller Incrementation Failure/Wrong Address

KDB50-FCO-1

FA-04714-01

digital™ **FCO**

Level of Urgency: **R**

Page 1 of 10

Field Change Order

Number: KDB50-R001

Applicability All VAXBI systems using the KDB50 DSA disk controller. This FCO incorporates ECO's T1002-CX008, T1002-CX009 and T1002-CX010. This revised FCO supersedes the original release dated 28 October 1986. It has been revised to correct part Rev identification to the T1002 module.

Problem Symptoms See page 2.

Quick Check See page 2.

Compatibility Prerequisite FCO Module must be at Rev D or higher, in order to do this FCO at the customer site. See page 2.

Estimated Time to Install 2.0 hours

Special Tools or Test Equipment N/A

FCO Parts Information

Order by FCO Kit #	Quantity	Part Number	Description
EQ-01429-01	1	70-23910-01	See page 2
FA-04714-01	1		FCO Document

EQ Kit Variation System-Option Applicability: N/A

Approvals

CSSE Engineer Glenn Scadden

F.S. Product Safety Jerry Gannelli Jan 87

F.S. Logistics Ed Duggan

Responsible CSSE Manager Mike Mayfield

F.S. Microfiche Libraries EP-FSNVX-LB VAX

Affected Population 900

MicroMedia Publishing Ray LeBlanc

Initial Kitting 900

Revision B

Hardcopy Publication 1,000

FCO Release Date 06 March 1987

Parts Availability November 1986

EN-01095-12-REV C (548)

Copyright © 1987 by Digital Equipment Corporation
All Rights Reserved

KDB50-FCO-2

Problem/Symptom: Continued from page 1

PROBLEM I STATEMENT

This problem exists only on a read of the disk, of either eight or twelve bytes, written to a memory buffer which is not longword aligned and does not cross an octaword boundary. The KDB50 will overwrite the two bytes of data following the buffer area. This is caused by the valid bits, for the first two bytes, not being cleared in the BCAI by the microcode after the full word transfer.

PROBLEM II STATEMENT

This problem occurs only when the KDB50 controller is directed to write the disk from a memory buffer starting on a non-octaword aligned address, within an octaword of a 64K boundary. When crossing the 64K boundary, the controller fails to increment the upper 16 bits of addressing and reads data from the start of the original 64K chunk of memory instead of the following 64K chunk, thus writing incorrect data to the disk.

PROBLEM III STATEMENT

When the KDB50 completes a data transfer after crossing a 64K memory address boundary by writing a word (not a longword) to a word location, the last data word is written to the wrong address. All of the data written before that last word is correct and in the correct location. The address of the last word gets written to is 64K addresses lower than it should have been.

NOTE: REFER TO SECTION I FOR VAX 8500/8700/8800 FIELD INSTALLATION AND TEST PROCEDURES.
REFER TO SECTION II FOR VAX 8200/8300 FIELD INSTALLATION AND TEST PROCEDURES.

Quick Check: Continued from page 1
Part number on PROM at E97, 23-127F6-00.
If PROM 23-127F6-00 is already installed in socket E97 on the KDB50 microprocessor module, then this FCO does not need to be performed.

Comp/Prereq: Continued from page 1
If the T1002 module is below Rev D, replace it with one that is above Rev D and do the FCO if needed.

FCO Parts Information: Continued from page 1

Order by FCO Kit#:	Quantity:	Part Number:	Description:
EQ-01429-01	1	70-23910-01*	6 piece PROM set
	1	*	Jumper 02POS(1x02).100CC
	1	*	Rev Label
FA-04714-01	1		FCO Documentation

* NOTE: ALL 8 (EIGHT) PARTS ARE INCLUDED UNDER PART NUMBER 70-23910-01

KDB50-FCO-3

I. VAX 8500/8700/8800 - FIELD INSTALLATION AND TEST PROCEDURES FOR KDB50-R001

> **NOTE**
>
> IT IS RECOMMENDED THAT A COMPLETE BACKUP BE PREFORMED PRIOR TO DOING THIS CHANGE ORDER.

1. Shut down the system by executing the shutdown command procedure.

```
$ @SYS$SYSTEM:SHUTDOWN
```

After VMS shuts down, type HALT....You will now be in console mode prompt is >>>

2. Using the 8800 console command, power 8800 off, open right rear door of CPU cabinet and set CB1, the main circuit breaker on the 876 power controller to the "OFF" (O) position.

```
>>>POWER OFF (CR)
```

Now turn CB1 off.

> **NOTE**
>
> THE USE OF E.S.D. PROTECTION IS A MUST IN THIS PROCEDURE. WHEN HANDLING COMPONENTS OF THIS NATURE IT IS STANDARD PRACTICE TO BE GROUNDED TO THE DEVICE VIA E.S.D. WRIST STRAP. COMPONENT DAMAGE WILL OCCUR IF PROPER GROUNDING IS NOT OBSERVED.

3. Use all ESD safety precautions.

4. Hook the ESD strap to wrist. Open air-flow slides in front of the card cage exposing area around slot containing the T1002 module.

5. Locate the T1002 module (KDB50 Microprocessor Module) in the BI module cage and raise the actuating lever and remove the module.

6. Check the revision of the T1002 module in the machine. If the T1002 module is at REV K1, reinstall it in the same slot and proceed to step 12. If the module revision is below revision K1, proceed to step 7.

KDB50-FCO-4

7. Locate the six PROM sockets in the upper left hand portion of the module (FIGURE 1).

8. Carefully remove the current PROMs and set them aside.

9. Insert the new PROMs in the following order:

Socket	PROM part number
E 50	23-120F6-00
E 61	23-121F6-00
E 72	23-126F6-00
E 83	23-123F6-00
E 92	23-124F6-00
E 97	23-127F6-00

This sequence of ROM part numbers are for a Rev K1 T1002 module. If the T1002 is above Rev K1, the ROM part number sequence may not match the above (due to ECOs applied to the T1002 after Rev K1).

10. Locate the jumpers W100,W200,W300,W400 on the right hand side of the module (FIGURE 1). Set the jumpers according to the chart (FIGURE 2).

11. Locate the revision level label along the top edge of the module and replace the label with the new revision label from the upgrade kit. The new revision label should indicate Rev K1 as the new Rev.

12. Replace module in the BI module cage. Insure that the module is properly seated and replace covers.

13. Set circuit breaker CB1 on the 876-A power controller to the ON (1) position. Close and latch cabinet doors.

Power up the CPU by typing the following command:

```
>>>POWER ON <CR> AT THE CONSOLE.
```

14. Verify that the KDB50 passes self test by observing that the amber light is illuminated on the T1002 module.

15. Run diagnostic EVRLF for three passes and diagnostic EVRLG for ten minutes. If the diagnostics run error free, then continue. If you run any diagnostic in the user data area of the disk, be sure that the customer's data is backed up.

16. Reboot the customers system and return the system to the customer.

17. Update site management guide to reflect FCO change.

18. Complete LARS form as per attached.

KDB50-FCO-5

II VAX 8200/8300 - FIELD INSTALLATION AND TEST PROCEDURE FOR KDB50-R001

```
***************************************************************************
*                                NOTE                                     *
*                                                                         *
*     IT IS RECOMMENDED THAT A COMPLETE BACKUP BE PREFORMED PRIOR         *
*     TO DOING THIS CHANGE ORDER.                                         *
*                                                                         *
***************************************************************************
```

1. Shut down the system by executing the shutdown command procedure.
   `$ @SYS$SYSTEM:SHUTDOWN`

2. Remove the processor cabinet front and rear doors.

3. Turn the upper keyswitch on the console panel to the fully counter-clockwise position. Then set the main circuit breaker at the back of the BA32 box to the "OFF" (DOWN) position.

```
***************************************************************************
*                               WARNING                                   *
*                                                                         *
*         IF BATTERY BACKUP H7231 IS PRESENT AS AN OPTION,                *
*         THE DEC-PWR-BUS CABLE 17-00931-0X MUST BE IN PLACE              *
*         BETWEEN THE 877 POWER CONTROLLER AND THE H7231 PRIOR            *
*         TO THE BA32 CIRCUIT BREAKER BEING PLACED IN THE OFF             *
*         POSITION.  IF THIS CABLE IS NOT IN PLACE, BATTERY               *
*         BACKUP MAY BECOME ACTIVATED.  THE CIRCUIT BREAKER ON            *
*         THE 877 POWER CONTROLLER MUST NOT BE UTILIZED.                  *
*                                                                         *
***************************************************************************
```

4. From the front of the CPU cabinet, fully extend the cabinet stabilizer leg.

5. From the rear of the processor cabinet, release the BA32 box track lock.

6. Slide the BA32 box out of the cabinet.

7. Remove the BA32 box top cover.

8. Put on the wrist strap found in the holding bag on the front base of the cabinet.

NOTE

THE USE OF E.S.D. PROTECTION IS A MUST IN THIS PROCEDURE. WHEN HANDLING COMPONENTS OF THIS NATURE IT IS STANDARD PRACTICE TO BE GROUNDED TO THE DEVICE VIA E.S.D. WRIST STRAP. COMPONENT DAMAGE WILL OCCUR IF PROPER GROUNDING IS NOT OBSERVED.

9. Locate the T1002 module (KDB50 Microprocessor Module) in the BI module cage and raise the actuating lever and remove the module.

10. Check the revision of the T1002 module in the machine. If the T1002 module is at REV K1, reinstall it in the same slot and proceed to step 20. If the module revision is below revision K1, proceed to step 11.

11. Locate the six PROM sockets in the upper left hand portion of the module (FIGURE 1).

12. Carefully remove the current PROMs and set them aside.

13. Insert the new PROMs in the following order:

Socket	PROM part number
E 50	23-120F6-00
E 61	23-121F6-00
E 72	23-126F6-00
E 83	23-123F6-00
E 92	23-124F6-00
E 97	23-127F6-00

This sequence of ROM part numbers are for a Rev K1 T1002 module. If the T1002 is above Rev K1, the ROM part number sequence may not match the above (due to ECOs applied to the T1002 after Rev K1).

14. Locate the jumpers W100,W200,W300,W400 on the right hand side of the module (FIGURE 1). Set the jumpers according to the chart (FIGURE 2).

15. Locate the revision level label along the top edge of the module and replace the label with the new revision label from the upgrade kit. The new revision label should indicate Rev K1 as the new Rev.

16. Replace module in the BI module cage. Insure that the module is properly seated and replace covers.

17. Place the top cover on the BA32 box but do not secure it with the 14 screws.

18. Power up the CPU by turning on the circuit breaker on the back of the BA32 box to the ON (1) position and turning the upper keyswitch on the front console panel to enable. The KDB50 self-test runs upon power up. Check that the yellow led on the T1002 lights. If the amber LED does not light, try reseating the module.

19. Run diagnostic EVRLF for three passes and diagnostic EVRLG for ten minutes. If the diagnostics run error free, then continue. If you run any diagnostic in the user data area of the disk, be sure that the customer's data is backed up.

20. Secure the BA32 box's top cover.

21. Slide the BA32 box back into the cabinet making sure that cables are not harmed.

22. Replace the two ground straps in the bag on the cabinet floor.

23. Replace and latch the processor cabinet front and rear doors.

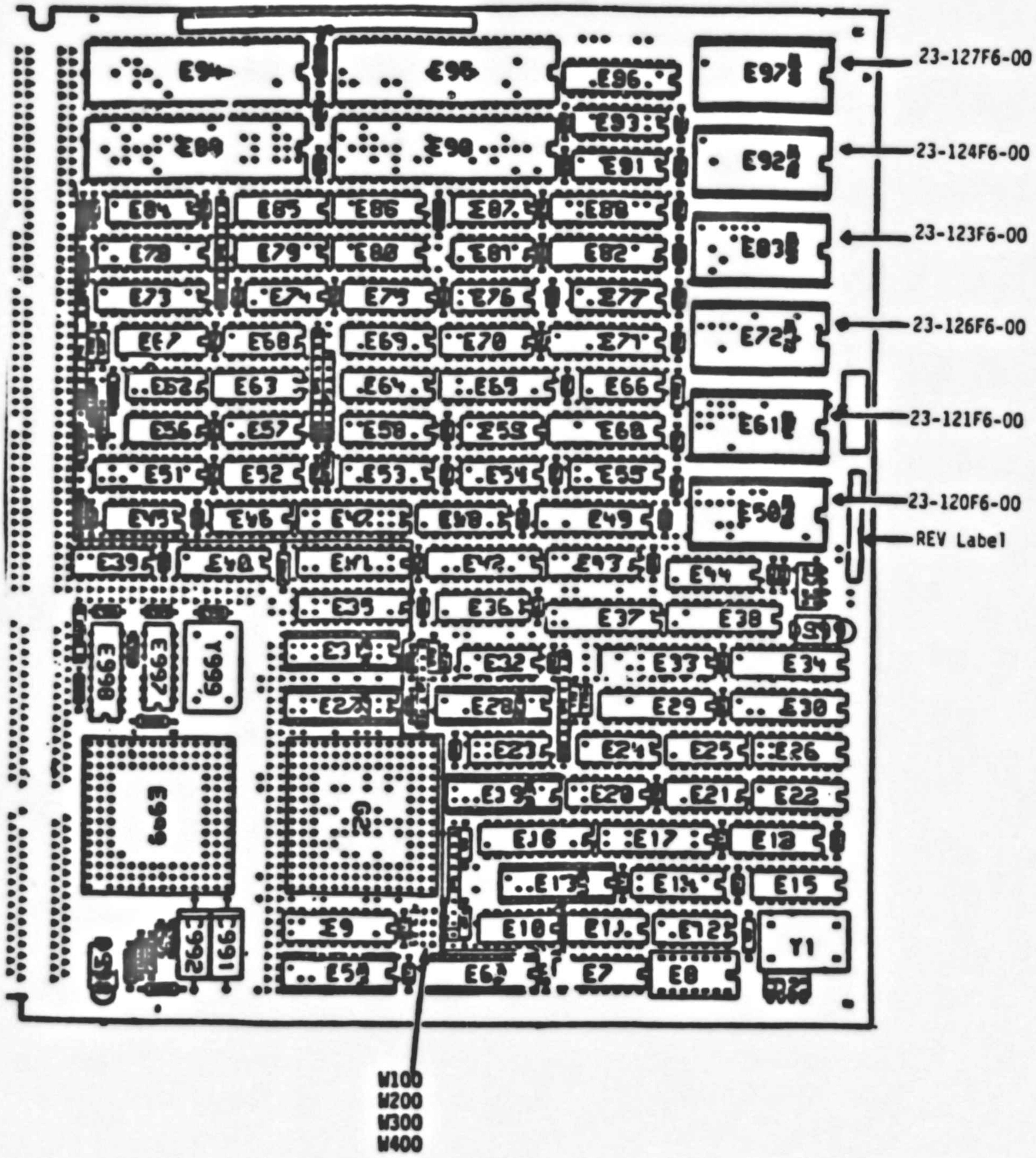
24. Bring up the operating system.

25 Reboot the customers system and return the system to the customer.

26. Update site management guide to reflect FCO change.

27. Complete LARS form as per attached.

Figure 1


23-127F6-00
23-124F6-00
23-123F6-00
23-126F6-00
23-121F6-00
23-120F6-00
REV Label
W100
W200
W300
W400

KDB-50- FCO- 9

Figure 2

```
+ +   +-+   + +   + +
 *    |W|    *     *
      |3|
      |0|
 *    |0|    *     *
+ +   +-+   + +   + +
 4     3     2     1
```

Detail "A"
After this ECO is implemented

Final Jumper Setup

JUMPER	STATE
1	OUT
2	OUT
3	IN
4	OUT

KDB-50-FCO-10

LARS

Activity	DEC Option	Type of Call	Action Taken	FCO # Comments	Material Used
For Contract and Warranty Customers U.S. and G.I.A.					
W	KDB50	M	D	KDB50-R001	EQ-01429-01
For Per CAll Customers U.S., G.I.A					
F	KDB50	M	D	KDB50-R001	EQ-01429-01
For Contract and Warranty Customers Europe					
Y	KDB50	M	I	KDB50-R001	EQ-01429-01
For Per Call Customers Europe					
F	KDB50	M	I	KDB50-R001	EQ-01429-01

KDB50-FCO- 11

KMC11

TECH. TIPS

29-Dec-1987
KMC11-INDEX.B
REV B

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KMC11--TT-01	0	14-Mar-78		DZ11 in comm IOP systems
-KMC11--TT-02	0	18-Sep-78		DN21 switches
-KMC11--TT-03	A	15-Sep-79		KMC11 bus loading
-KMC11--TT-04	0	28-Nov-79		KMC11-B switch settings
-KMC11--TT-05	0	22-Sep-84		Prog timer val for Unix +X.25
-KMC11--TT-06	A	14-Jun-82		KMC11-B program timer clarif
-KMC11--TT-07	A	21-Aug-83		KMC11-B program timer clarif

KMC11-TT-1

digital	**FIELD SERVICE TECHNICAL MANUAL**				Option or Designator KMC11
	12 Bit ☐	16 Bit ☒	18 Bit ☐	36 Bit ☐	

Title DZ11 IN COMM IOP SYSTEMS			Tech Tip Number KMC11-TT-1
Author DICK GOODWIN	F.S. Office MERRIMACK	Date 14.3.78	Revision 0
Processor Applicability All 11	Mgr./Sup IRV PATON	Date 14.3.78	Cross Reference DZ11-TT-2
	Approval: MARK HALD	Date 14.3.78	

THIS TECH TIP IS FOR CROSS REFERENCE ONLY.

KMC11-TT-2

Title	DN21 SWITCHES				Tech Tip Number KMC11-TT-2
Author	ROBERT NOBREGA	F.S. Office I.H.F.S.		Date 8.30.78	Revision 0
Processor Applicabilty		Mgr./Sup. DAVE RUSSELL		Date	Cross Reference
All	20 | 11	Approval: D. GOODWIN		Date 9.18.78	DN21-TT-1

THIS TECH TIP IS FOR CROSS REFERENCE ONLY.

KMC11-TT-3

Title KMC-11 BUS LOADING				Tech Tip Number KMC11-TT-3
Author PETER JONES	F.S. Office MAYNARD	Date	5/15/79	Revision A
Processor Applicability All 11	Mgr./Sup. LARRY GOELZ	Date	5/15/79	Cross Reference
	Approval:	Date		

THE KMC-11 IS PARTICULARLY SENSITIVE TO A NOISY UNIBUS, MAINLY DUE TO THE 8647 INTERRUPT/NPR CONTROL CHIP. UNFORTUNATELY, THE MODULE ALSO PRESENTS SEVEN (7) A.C. BUS LOADS ON BUS BBSY, AND IS THUS LIKELY TO PRODUCE EXCESSIVE REFLECTIONS WHEN USED IN QUANTITIES GREATER THAN TWO IN THE SAME LUMPED LOAD. WHEN INSTALLING OR EXPERIENCING PROBLEMS WITH KMCs:

1. MAKE SURE BOTH 8647 CHIPS (E11, E12) HAVE A DOT OF WHITE PAINT, INDICATING THEY HAVE BEEN SPECIALLY TESTED. IF NOT, REPLACE THE MODULE.

2. ADHERE STRICTLY TO THE RULE OF NO MORE THAN 20 A.C. BUS LOADS IN A LUMP. IN PRACTICE, THIS MEANS TWO KMCs PER DD11-C (4 SLOT BACKPLANE) REMEMBERING THAT THE DD11-C HAS FOUR A.C. BUS LOADS. The DD11-D (9 slot backplane) is equivalent to four A.C. Bus Loads (slots 1-4), 2ft Bus Cable and another four A.C. Bus Loads (slots 5-9).

3. REMEMBER THAT EACH M8204 USES 5A at +5V AND THAT EACH H744 IS RATED AT 25A.

REV B 1979

KMC11-TT-4

Title KMC11-B SWITCH SETTINGS		Tech Tip Number KMC11-TT-4
Author MACK CLARKE	F.S. Office COLS OFFICE Date 11.28.7	Revision 0
Processor Applicability	Mgr./Sup. GEORGE MULICK Date	Cross Reference
All 11	Approval Date	

PROBLEM: All switch settings are not called out in the manuals. But they are in the print set. Fails both diagnostics depending on these switch settings.

SOLUTION: Vector switch pack E27 has two switches S2-9 and S2-10 that must be on for KMC11-B to pass diagnostics. S2-9 is on page D1 of prints. It is labeled GR test. Below is a table of how the diagnostics will fail if switches are in the wrong positions.

GR TEST E27-S9	DATA BUS AC LO E27-S10	Z093DA.BIN	Z093DB.BIN
ON	ON	PASS	PASS
ON	OFF	PASS	POWER FAIL ERROR
OFF	ON	FAIL TEST 31 ERR5	FAIL TEST 2 ERR12
OFF	OFF	FAIL TEST 31 ERR5	FAIL TEST 2 ERR12

DEC CONFIDENTIAL This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Organization only.

KMC11-TT-5

digital | **FIELD SERVICE TECHNICAL MANUAL** | Option or Designator KMC11

12 Bit ☐ 16 Bit ☒ 18 Bit ☐ 36 Bit ☐

Title PROGRAM TIMER VALUES FOR UNIX + X.25		Tech Tip Number KMC11 -TT-5	
Author Mike Carlton	F.S. Office Nashua	Date 9/22/80	Revision 0
Processor Applicability All 11 VAX	Mgr./Sup. Jim Coburn	Date	Cross Reference
	Approval: Jim C	Date 9/22/80	

The KMC11-B Program Timer has two time values which can be used depending on the application of the firmware.

The COM-IOPDZ application used by Bell Telephone running under UNIX software will run only if the timer value is 75 microseconds. If the firmware is running X.25 Protocol, the timer value must be at 115 milliseconds. Diagnostics will not detect this yet only the firmware application will detect it. If you have a problem with your application check the value of CAP C40 on the M8206 (KMC11-B).

A 4700PF CAP equals 75 microseconds.

A 10uf CAP equals 115 milliseconds.

DEC CONFIDENTIAL
This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Orginization only.
For information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KMC11-TT-6

digital	**FIELD SERVICE TECH TIP**					**Option Designator** KMC11-B
	☐ 12 Bit	☒ 16 Bit	☐ 18 Bit	☒ 32 Bit	☐ 36 Bit	**Category** COMPUTERS
Title KMC11-B PROGRAM TIMER CLARIFICATION						**Tech Tip No.** KMC11-TT-6
Processor Applicability 11 VAX		**Cross Reference** KMC11-TT-5				**Tech Tip Rev** A — **Page** 1 of 1
Author DON SMITH			**Mgr./Supv. Approval** N/A			
Location ATLANTA		**Mail Stop** AT				**Date** 11 MAY 82
CSSE Approval JIM COBURN		Jim Coburn				**Date** 20 MA 82
PSG Approval BOB O'MALLEY						**Date** 14 June

KMC11-TT-5 is correct for ETCH REV "D" M8206's. Capacitor 40 is used to select the correct software timer value.

ETCH REV "E" M8206's have re-designated C40 (ECO M8206-NU008) and a new switch pack has been installed to select the correct software timer value. This switch pack is designated E82 and is located close to the handle in the center of the module close to J1. E82 is an 8 position switch, but switches 1 thru 7 are not presently used. Switch 8 selects the proper timer.

E82-8 "ON" = 115 millisec

E82-8 "OFF" = 75 microsec

See the KMS11 (note: this is the KMS11) Pocket Service Guide-Part No. EK-KMS11-PS-001 Chapter 5 pp 71 thru 87 for M8206 configurations.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

Page Revision A	**Publication Date** JULY 1982

KMC11-TT-7

digital	**FIELD SERVICE TECH TIP** ☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☐ 32 Bit ☐ 36 Bit	**Option Designator** KMC11
		Category COMPUTERS
Title KMS11 DIAGNOSTIC FAILURE		**Tech Tip No.** KMC11-TT-7
Processor Applicability 1 | 1 | 7 | 5 | 0 | | |	**Cross Reference** KMS11-TT-6	**Tech Tip Rev** A — **Page** 1 of 1
Author J. SOBECKY/G. BENDER	**Mgr./Supv. Approval** STAN MOSS	
Location MAYNARD	**Mail Stop** PK01/F36	**Date** 3 MAY 83
CSSE Approval JIM COBURN		**Date** 21 Aug 83
PSG Approval		**Date**

THIS TECH TIP IS FOR CROSS REFERENCE ONLY.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

Page Revision	Publication Date
A	SEPTEMBER 1983

KMC11-TT-8

KMC11-B

TECH. TIPS

19-Aug-1987
KMC11-B-INDEX.A
REV A

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KMC11-B-TT-01	A	28-May-86	433	Diagnostic failure (EVDHB)

KMC11-B-TT-1

Field Service TECH TIP

digital™

Page 1 of 1

Category Systems

Rev A

Title DIAGNOSTIC FAILURE (EVDHB)

Option KMC11-B

Cross Reference N/A

TECH TIP No. KMC11-B-TT-01

Problem/Solution

PROBLEM:

KMS diagnostic EVDHB fails under diagnostic supervisor version 9.0 with the following message; "QIO CALL NOT ACCEPTED BY DRIVER".

CAUSE:

All current documentation says that the UAF parameter BYTLM must be at least 8204. Under the latest supervisor (9.0), this is not enough.

SOLUTION:

When running under Version 9.0 of the supervisor, set the BYTLM quota to at least 8364.

Approvals

Author MAURICE WILLIAMS	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE Maurice J Williams MAURICE WILLIAMS
Author's Manager PHIL DUDZIAK		Field Service Product Safety
Release Date 28 May 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation.
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

KMC 11-B-TT-2

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

KMS11

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

TECH. TIPS

29-Dec-1987
KMS11-INDEX.B
REV B

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KMS11--TT-01	0	22-Sep-80		KMC11-B program timer change
-KMS11--TT-02	0	7-Dec-81		DMS11-DA config restrictions
-KMS11--TT-03	A	29-Jan-82		KMS11 fails test 11
-KMS11--TT-04	A	14-Jun-82		KMC11-B program timer clarificatn
-KMS11--TT-05	A	9-Aug-82		KMS11 runs unix
-KMS11--TT-06	A	21-Aug-83		KMS11 diag failure
-KMS11--TT-07	A	18-Jul-85	391	8-line communications processor
-KMS11--TT-08	A	1-Aug-85	392	KMS11 maintenance A/V tape
-KMS11--TT-09	A	26-Aug-85	396	8-line communication processor

KMS11- TT-1

digital	**FIELD SERVICE TECHNICAL MANUAL**	Option or Designator KMS11
	12 Bit ☐ 16 Bit ☒ 18 Bit ☐ 36 Bit ☐	

Title KMC11-B PROGRAM TIMER CHANGE			Tech Tip Number KMS11 -TT-1
Author Mike Carlton	F.S. Office Nashua	Date 9/22/80	Revision 0
Processor Applicability	Mgr./Sup. Jim Coburn	Date 9/22/80	Cross Reference
All 11 VAX	Approval: Jim C	Date 9/22/80	KMC11-B-TT-5

THIS TECH TIP FOR CROSS REFERENCE ONLY

DEC CONFIDENTIAL
This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Orginization only.
For information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

PRINTED IN U.S.A.

EN–01189B-12-R1276(79Y)

KMS11-TT-2

digital	**FIELD SERVICE TECHNICAL MANUAL**				Option or Designator KMS11
	12 Bit ☐	16 Bit ☒	32 Bit ☒	36 Bit ☐	

Title DMS11-DA CONFIGURATION RESTRICTIONS				Tech Tip Number	KMS11-TT-2
Author H.T. Zibailo	F.S. Office Nashua	Date	12/7/81	Revision 0	
Processor Applicabilty	CSSE J. Coburn JC	Date	12/7/81	Cross Reference	
All | 11 | VAX	PSG H. Dymek	Date	12/7/81	DMS11-TT-1	

Due to the design of the M8704 module as used in the KMS11, it will only operate if used in a MUD (Modified Unibus Device) slot. This applies to M8704 etch rev. "B" CS rev. "B".

The reason for this is that fingers AR1 and AS1 supply the + and -15V to the board. These voltages are not available on pins AR1 and AS1 except in MUD slots.

The M8704 module is undergoing a relayout so that voltages will be supplied from fingers CU1 and CB2.

Until the new etch is available, the DMS-11 cannot be used in applications such as BA11-A boxes, 11/70 CPU backplane SPC slots, or 11/44 SPC slots.

NOTE: Although the BA11-A box contains MUD slots, the voltages supplied are + and -12V.

DEC CONFIDENTIAL

This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Orginization only.
For information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

Page 2	Page Revision 0	Publication Date 28 January 1982

PRINTED IN U.S.A.

EN–01100B·12·R1276(79Y)

KMS11-TT-3

digital

FIELD SERVICE TECHNICAL MANUAL

Option or Designator KMS11/DB

12 Bit ☐ 16 Bit ☒ 18 Bit ☐ 32 Bit ☒

Title KMS11 FAILS TEST 11 IN YM-Z136D-11			Tech Tip Number KMS11-TT- 3
Author JIM KARSTEN	F.S. Office CRPS	Date 29-OCT-81	Revision A
Processor Applicability All | 11 | VAX | | | | |	CSSE	Date 29-Jan-82	Cross Reference
	PSG	Date 11/7/81	

WHEN RUNNING THE KMS11 STATIC DIAGNOSTIC YM-Z136D-11 WITH THE NEW SMS11 BOARD, M8704 TEST 11 WILL FAIL AND REPORT THAT IT EXPECTED A 60 AND RECEIVED A 20. THE OLD DMS11 BOARD M8711-YA WILL PASS THIS TEST. THE REASON FOR THIS FAILURE ON THE NEW BOARD IS THAT THE CRC 32 CIRCUITRY WAS REMOVED. THE BOARD AND GROUNDED THE INPUT TO THE PR1 REG OUTPUT MUX FOR CRC-CHECK ENB ON TX PR1 REG BIT 5. THIS WILL CAUSE THIS BIT TO ALWAYS BE RETURNED AS A ZERO (0). THIS WILL CAUSE THE TEST TO FAIL. IF YOU PUT IN THE FOLLOWING PATCH THE DIAGNOSTIC WILL RUN.

PATCH LOC	WAS	CHANGE TO
4022	337	377

DEC CONFIDENTIAL
This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Organization only.
For information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KMS11-TT-4

digital

FIELD SERVICE TECH TIP

☐ 12 Bit ☒ 16 Bit ☐ 18 Bit ☑ 32 Bit ☐ 36 Bit

Option Designator KMS11

Category COMPUTERS

Title KMC11-B PROGRAM TIMER CLARIFICATION

Tech Tip No. KMS11-TT-4

Processor Applicability 11 VAX

Cross Reference KMC11-TT- 6

Tech Tip Rev A

Page 1 of 1

Author DON SMITH

Mgr./Supv. Approval N/A

Location ATLANTA

Mail Stop AT

Date 11 MAY 82

CSSE Approval JIM COBURN Jim Coburn

Date 20 MAY 82

PSG Approval BOB O'MALLEY

Date 14 June 82

KMC11-TT-5 is correct for ETCH REV "D" M8206's. Capacitor 40 is used to select the correct software timer value.

ETCH REV "E" M8206's have re-designated C40 (ECO M8206-NU008) and a new switch pack has been installed to select the correct software timer value. This switch pack is designated E82 and is located close to the handle in the center of the module close to J1. E82 is an 8 position switch, but switches 1 thru 7 are not presently used. Switch 8 selects the proper timer.

E82-8 "ON" = 115 millisec

E82-8 "OFF" = 75 microsec

See the KMS11 (note: this is the KMS11) Pocket Service Guide-Part No. EK-KMS11-PS-001 Chapter 5 pp 71 thru 87 for M8206 configurations.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KMS11-TT-5

digital	**FIELD SERVICE TECH TIP** ☐ 12 Bit ☒ 16 Bit ☐ 18 Bit ☐ 32 Bit ☐ 36 Bit	**Option Designator** KMS11 **Category** COMPUTERS	
Title KMS11 RUNNING UNIX WITH BELL LABS BX,25 PROTOCOL		**Tech Tip No.** KMS11-TT-5	
Processor Applicability 11	**Cross Reference** N/A	**Tech Tip Rev** A	**Page** 1 of 1
Author RICHARD MAUTZ	**Mgr./Supv. Approval** N/A		
Location SANTA MONICA, CA	**Mail Stop** LXO	**Date** 7 JUL 82	
CSSE Approval JIM COBURN Jim Co		**Date** 26 JUL 82	
PSG Approval BOB O'MALLEY RAO		**Date** 9 AUG 82	

SYSTEMS WITH THE KMS11 INSTALLED ON THEM AND RUNNING UNDER UNIX WITH BX.25 PROTOCOL. IT IS IMPORTANT THAT UNUSED LINES BE TERMINATED WITH H325 TURN-AROUND CONNECTORS. THIS IS DUE TO THE FACT THAT UNIX POLLS ALL 8 LINES, WHETHER THEY ARE USED OR NOT AND EXPECTS TO GET A RESPONSE FROM EACH LINE. OTHERWISE, UNIX WILL EXECUTE AN INORDINATE AMOUNT OF UNNECESSARY ERROR REPORTING CODES.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KMS11-TT-6

FIELD SERVICE TECH TIP

☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☐ 32 Bit ☐ 36 Bit

Option Designator KMS11

Category COMPUTERS

Title KMS11 DIAGNOSTIC FAILURE

Tech Tip No. KMS11-TT-6

Processor Applicability 1 | 1 | 7 | 5 | 0

Cross Reference KMC11-TT-7

Tech Tip Rev A

Page 1 of 1

Author J. SOBECKY/G. BENDER G.P.D.

Mgr./Supv. Approval STAN MOSS

Location MAYNARD

Mail Stop PK01/F36

Date 03-MAY-83

CSSE Approval JAMES COBURN Henry T.

Date 21 Aug 83

Date

THERE IS A PROBLEM THAT OCCURS WHEN RUNNING EVDHA.EXE REV 2.0 KMC11-B REPAIR LEVEL DIAGNOSTIC WITH ECSAA DIAG. SUPV REV 6.8 ON A VAX-11750 WITH THE OPTIONAL SECOND DW750 INSTALLED THE PROBLEM SHOWS UP IN TEST 11, THE INTERRUPT TEST. THE ERROR REPORT SHOWS:

```
??UNEXPECTED TRAP OR INTERRUPT THRU VECTOR XXXX
```

VECTOR BIT 10(X) WILL BE THE VECTOR BIT IN ERROR THAT IS SET.

THE KMS11 WILL RUN ERROR FREE ON THE FIRST DW750. AN AIDS REPORT HAS BEEN FILED ON THIS PROBLEM.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

EN-01586-12-REVA(7/82)

KMS11-TT-7

digital

FIELD SERVICE TECH TIP

☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☐ 32 Bit ☐ 36 Bit

Option Designator KMS11

Category COMMUNICATIONS

Title 8-Line Communications Processor

Tech Tip No. KMS11-TT-07

Processor Applicability PDP|11| VAX| | | |

Cross Reference N/A

Tech Tip Rev A

Page 1 of 1

Author Herb Goodrich

Mgr./Supv. Approval Tom Lowery

Location HZO

Mail Stop HZO

Date July 18, 1985

CSSE Approval Maurice J. Williams

Date July 18, 1985

FSPSG Approval

Date

POCKET SERVICE GUIDE ERRORS (EK-KMS11-PS-003)

Table 5-5 on page 81:

Title reads "Address Selection". Should read "Vector Address Selection".

Table Reads:

S1	S2	S3	S4	S5	S6	S7
(V2)	(V3)	(V4)	(V5)	(V6)	(V7)	(NOT USED)

Should Read:

S1	S2	S3	S4	S5	S6	S7	S8
(V2)	(V3)	(V4)	(V5)	(V6)	(V7)	(V8)	(A2 OF ADDRESS NORMALLY "OFF".

Table 2-10, pg 2-28 of the KMS11-BD/BE SYNCHRONOUS COMMUNICATIONS PROCESSOR USERS GUIDE EK-KMSBE-UG is correct.

Note: Table 5-4, pg 78 and 79 of the PSG does not show A2 of the Address as controlled by sw. 8 of the Vector switch pack (E49). Normally not used.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KMS11-TT-8

digital	**FIELD SERVICE TECH TIP** ☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☐ 32 Bit ☐ 36 Bit		**Option Designator** KMS11 **Category** DIAGNOSTICS
Title KMS11 MAINTENANCE A/V TAPE			**Tech Tip No.** KMS11-TT-08
Processor Applicability VAX 11	**Cross Reference** N/A	**Tech Tip Rev** A	**Page** 1 of 1
Author Dave Smolinski	**Mgr./Supv. Approval** Tom Lowery		
Location HZO	**Mail Stop** HZO		**Date** July 31, 1985
CSSE Approval Dave Smolinski			**Date** 8-1-85
FSPSG Approval			**Date**

For the KMS11 there is a Maintenance Aid video tape available from Bedford. This tape covers overview, installation, cabling, switch settings, diagnostic, and troubleshooting. The part number for this tape is EY-2875E-U1. The cost is roughly $50.00, and is available from FIELD SERVICE TRAINING SEMINARS.

The information that they need is:

NAME:______________________________ TEL:____________________

SHIP TO: DIGITAL EQUIPMENT CORPORATION

STREET ADDRESS: ____

CITY/STATE/ZIP: ____

SHIP TO ATTENTION: ____

MAILSTOP: ____________ CHARGE TO COST CENTER: ________________

APPROVAL SIGNATURE: ____

With this information and the part number for the tape, mail it to:

Field Service Training Seminars
BUO/E38

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KMS11-TT-9

digital	**FIELD SERVICE TECH TIP**	**Option Designator** KMS11
	☐ 12 Bit ☒ 16 Bit ☐ 18 Bit ☒ 32 Bit ☐ 36 Bit	**Category** COMMUNICATIONS

Title
8-Line Communication Processor

Tech Tip No.
KMS11-TT-09

Processor Applicability
PDP 11 VAX

Cross Reference
N/A

Tech Tip Rev
A

Page
1 of 2

Author
Maurice Williams

Mgr./Supv. Approval
Tom Lowery

Location
HZO

Mail Stop
HZO

Date
August 26, 1985

CSSE Approval
Maurice J Williams

Date
Aug 26, 1985

FSPSG Approval

Date

POCKET SERVICE GUIDE ERRORS (EK-KMS11-PS-003)

Para 5.2, page 70

Reads: "M8206 (Rev E): KMC11-B UNIBUS MICROPROCESSOR"

The heading is correct, but the module shown is the M8704. The configuration notes are also for the M8704 module.

Para 5.4, page 82

Reads: M8704 DMS11-D/DA SYNCHRONOUS LINE UNIT"

The heading is correct, but the module show is the M8206. The configuration notes are also for the M8206 module.

Table 5-4, pages 78 & 79

This table is for address selection, not vector as stated on pg 78.

= BE ADVISED =

THE "ON/OFF" NOTATIONS ARE REVERSED! "ON" = 1, "OFF" = 0.

Page 79 is a continuation of the table on page 78 which should read "M8640 (Rev C) DM11-BA Address Selection". The title "M8206 (Rev d) KMC11-B Address Selection (E129) (cont)" is incorrect.

Note: Address bit A02 is controlled by switch E49-8.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

KMS11-TT-10

digital	FIELD SERVICE TECH TIP	Option Designator KMS11
	Continuation Sheet	Category COMMUNICATIONS

Title
8-Line Communication Processor

Tech Tip No.
KMS11-TT-09

Processor Applicability
PDP 11 VAX

Cross Reference
N/A

Tech Tip Rev
A

Page
2 of 2

Table 5-5, page 81

This table is for vector selection, not address as stated on pg 81.

= BE ADVISED =

THE "ON/OFF" NOTATIONS ARE REVERSED! "ON" = 1, "OFF" = 0.

Switch Settings

Are Now:

S1	S2	S3	S4	S5	S6	S7
(V3)	(V4)	(V5)	(V6)	(V7)	(V8)	(Not Used)

Should Be:

S1	S2	S3	S4	S5	S6	S7	S8
(V2)	(V3)	(V4)	(V5)	(V6)	(V7)	(V8)	(A2)

Accordingly, the table is wrong. Consult the KMS-BD/BE Synchronous Communications Processor User Guide for proper switch settings.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2

KMS11-TT-11

KMS11-BD

TECH. TIPS

21-Aug-1987
KMS11BD-INDEX.A
REV A

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KMS11-BD-TT-01	A	2-Dec-85	409	Cable replacement
-KMS11-BD-TT-02	A	19-Feb-86	427	Pocket service guide errors
-KMS11-BD-TT-03	A	19-Feb-86	418	Diag EVDJA failure VAX 780
-KMS11-BD-TT-04	A	28-May-86	433	Diag failure (EVDHB)

KMS11-BD TT-1

digital	**FIELD SERVICE TECH TIP**					**Option Designator** KMS11-BD
	☐ 12 Bit	☐ 16 Bit	☐ 18 Bit	☐ 32 Bit	☐ 36 Bit	**Category** Hardware

Title Cable Replacement - BC17C for BC22F		**Tech Tip No.** KMS11-BD-TT-01	
Processor Applicability PDP 11 | VAX | | | |	**Cross Reference** KMS11-BE-TT-01 KMS11-P-TT-01	**Tech Tip Rev** A	**Page** 1 of 1
Author Maurice Williams	**Mgr./Supv. Approval** Tom Lowery		
Location HZO	**Mail Stop** HZO	**Date** December 2, 1985	
CSSE Approval Maurice J. Williams		**Date**	
FSPSG Approval		**Date**	

PROBLEM: Line noise problems when using the BC22F cable to connect the bulkhead panel to RS232-C modems. (This cable is not provided with the option)

SOLUTION: Replace the BC22F cable with a BC17C. The BC22F has 25 wire connections whereas the BC17C has only 18. (pins 9, 10, 11, 13, 14, 16 and 21 are not connected) However, the clock lines (15, 17 and 24) are shielded on the BC17C, reducing cross-talk problems within the cable.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

Page Number 1	**Page Revision** A	**Publication Date** DECEMBER 1985

KMS11-BD-TT-2

Field Service TECH TIP

digital™

Page 1 of 1

Category Documentation Rev A

Title Pocket Service Guide Errors

Option KMS11-BD

Cross Reference KMS11-P-TT-02
KMS11-BE-TT-02

TECH TIP No. KMS11-BD-TT-02

Problem/Solution

POCKET SERVICE GUIDE ERRORS (EK-KMS11-PS-003)

Pg 85 (Table 5-6)

READS:

	KMS11-P CCITT V.35 or RS-423-A	KMS11-P EIA	KMS11-P EIA RS-422-A
S5	OFF	ON	OFF

SHOULD BE:

	KMS11-P CCITT V.35	KMS11-P EIA RS-232-C OR RS-423-A	KMS11-P EIA RS-422-A
S5	ON	OFF	OFF

PG 87 (Table 5-7)

READS:

W17 OUT

SHOULD BE:

W17 IN

Approvals

Author Maurice Williams Maurice Williams	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE
Author's Manager Tom Lowery		Field Service Product Safety
Release Date 19 February 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation.
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2

KMS11-BD-TT-3

Field Service TECH TIP

digital™

Page 1 of 1

Category Diagnostic Rev A
Option KMS11-BD
TECH TIP No. KMS11-BD-TT-03

Title Diagnostic EVDJA Failure-VAX 780
Cross Reference N/A

Problem/Solution

DIAGNOSTIC EVDJA (LEVEL 3) MODEM CONTROL MULTIPLEXER.

PROBLEM:

Diagnostic failure when running the DM11-BA diagnostic (EVDJA) on a VAX 780. Problem does not affect on-line operation.

CAUSE:

The diagnostic does not recognize vector addresses of 400 or greater (bit 8 set).

SOLUTION:

The vector address must be set to less than 400 to run the diagnostic. It can then be reset to any vector address for system operation.

Approvals

Author Maurice Williams	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE Richard T. Lowrey
Author's Manager Tom Lowrey		Field Service Product Safety
Release Date 19 February 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2

KMS11-BD-TT-4

Field Service TECH TIP

digital™

Page 1 of 1

Category Systems

Rev A

Title DIAGNOSTIC FAILURE (EVDHB)

Option KMS11-BD

Cross Reference KMS11-BE-TT-03

TECH TIP No. KMS11-BD-TT-04

Problem/Solution

PROBLEM:

KMS diagnostic EVDHB fails under diagnostic supervisor version 9.0 with the following message; "QIO CALL NOT ACCEPTED BY DRIVER".

CAUSE:

All current documentation says that the UAF parameter BYTLM must be at least 8204. Under the latest supervisor (9.0), this is not enough.

SOLUTION:

When running under Version 9.0 of the supervisor, set the BYTLM quota to at least 8364.

Approvals

Author MAURICE WILLIAMS	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE Maurice J Williams MAURICE WILLIAMS
Author's Manager PHIL DUDZIAK		Field Service Product Safety
Release Date 28 May 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation.
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

EN-01584-12 REV C(5/84)

KMS11-BD-TT-5

KMS11-BE

TECH. TIPS

21-Aug-1987
KMS11BE-INDEX.A
REV A

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KMS11-BE-TT-01	A	2-Dec-85	409	Cable replace-BC17C for BC22F
-KMS11-BE-TT-02	A	18-Apr-86	418	Pocket service guide errors
-KMS11-BE-TT-03	A	28-May-86	433	Diagnostic failure (EVDHB)

KMS11-BE-TT-1

Field Service TECH TIP

digital™

Page 1 of 1

Category Hardware
Rev A

Title Cable Replacement-BC17C for BC22F
Option KMS11-BE

Cross Reference KMS11-BD-TT-01, KMS11-P-TT-01
TECH TIP No KMS11-BE-TT-01

Problem/Solution

PROBLEM: Line noise problems when using the BC22F cable to connect the bulkhead panel to RS232-C modems. (This cable is not provided with the option)

SOLUTION: Replace the BC22F cable with a BC17C. The BC22F has 25 wire connections whereas the BC17C has only 18. (pins 9, 10, 11, 13, 14, 16 and 21 are not connected) However, the clock lines (15, 17 and 24) are shielded on the BC17C, reducing cross-talk problems within the cable.

Approvals

Author Maurice Williams	ESD&P TECH TIP Coordinator Oya Koray	CSSE Maurice Williams
Author's Manager Tom Lowery		Field Service Product Safety
Release Date 02 December 1985		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

KMS11-BE-TT-2

Field Service TECH TIP

digital™

Page 1 of 1

Category Documentation Rev A

Title Pocket Service Guide Errors KMS11-P-TT-02

Option KMS11-BE

Cross Reference KMS11-BD-TT-02

TECH TIP No. KMS11-BE-TT-02

Problem/Solution

POCKET SERVICE GUIDE ERRORS (EK-KMS11-PS-003)

Pg 85 (Table 5-6)

READS:

	KMS11-P CCITT V.35 or RS-423-A	KMS11-P EIA	KMS11-P EIA RS-422-A
S5	OFF	ON	OFF

SHOULD BE:

	KMS11-P CCITT V.35	KMS11-P EIA RS-232-C OR RS-423-A	KMS11-P EIA RS-422-A
S5	ON	OFF	OFF

PG 87 (Table 5-7)

READS:

W17 OUT

SHOULD BE:

W17 IN

Approvals

Author Maurice Williams	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE Richard T. Lowrey
Author's Manager Tom Lowrey		Field Service Product Safety
Release Date 18 April 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

KMS11-BE-TT-3

Field Service **TECH TIP**

digital™ Page 1 of 1

		Category	Systems Rev A
Title	Diagnostic Failure (EVDHB)	Option	KMS11-BE
Cross Reference	KMS11-BD-TT-04	TECH TIP No.	KMS11-BE-TT-03

Problem/Solution

KMS diagnostic EVDHB fails under diagnostic supervisor version 9.0 with the following message; "QIO CALL NOT ACCEPTED BY DRIVER".

CAUSE:

All current documentation says that the UAF parameter BYTLM must be at least 8204. Under the latest supervisor (9.0), this is not enough.

SOLUTION:

When running under Version 9.0 of the supervisor, set the BYTLM quota to at least 8364.

Approvals

Author Maurice Williams	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE Maurice Williams
Author's Manager Phil Dudzaik		Field Service Product Safety
Release Date 28 May 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation.
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

KMS11-BE-TT-4

KMS11-P

TECH. TIPS

9-Sep-1987
KMS11-P-INDEX.A
REV A

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KMS11-P-TT-01	A	2-Dec-85	409	Cable replacement-BC17C for BC22F
-KMS11-P-TT-02	A	19-Feb-86	418	Pocket service guide errors

KMS11-P-TT-1

digital	**FIELD SERVICE TECH TIP**					**Option Designator** KMS11-P
	☐ 12 Bit	☐ 16 Bit	☐ 18 Bit	☐ 32 Bit	☐ 36 Bit	**Category** Hardware
Title Cable Replacement - BC17C for BC22F						**Tech Tip No.** KMS11-P-TT-01
Processor Applicability PDP11 VAX		**Cross Reference** KMS11-BD-TT-01, KMS11-BE-TT-01				**Tech Tip Rev** A / **Page** 1 of 1
Author Maurice Williams			**Mgr./Supv. Approval** Tom Lowery			
Location HZO		**Mail Stop** HZO				**Date** December 2, 1985
CSSE Approval Maurice J Williams						**Date**
FSPSG Approval						**Date**

PROBLEM: Line noise problems when using the BC22F cable to connect the bulkhead panel to RS232-C modems. (This cable is not provided with the option)

SOLUTION: Replace the BC22F cable with a BC17C. The BC22F has 25 wire connections whereas the BC17C has only 18. (pins 9, 10, 11, 13, 14, 16 and 21 are not connected) However, the clock lines (15, 17 and 24) are shielded on the BC17C, reducing cross-talk problems within the cable.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

Page Number 1	**Page Revision** A	**Publication Date** DECEMBER 1985

KMS11-P-TT-2

Field Service TECH TIP

digital™

Page 1 of 1

Category Documentation Rev A

Title Pocket Service Guide Errors

Option KMS11-P

Cross Reference KMS11-BD-TT-02
KMS11-BE-TT-02

TECH TIP No. KMS11-P-TT-02

Problem/Solution

POCKET SERVICE GUIDE ERRORS (EK-KMS11-PS-003)

Pg 85 (Table 5-6)

READS:

	KMS11-P CCITT V.35 or RS-423-A	KMS11-P EIA	KMS11-P EIA RS-422-A
S5	OFF	ON	OFF

SHOULD BE:

	KMS11-P CCITT V.35	KMS11-P EIA RS-232-C OR RS-423-A	KMS11-P EIA RS-422-A
S5	ON	OFF	OFF

PG 87 (Table 5-7)

READS:

W17 OUT

SHOULD BE:

W17 IN

Approvals

Author Maurice Williams Maurice Williams	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE
Author's Manager Tom Lowery		Field Service Product Safety
Release Date 19 February 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2

[illegible]

KMS11-P-TT-3

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

KMS1P-M

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

TECH. TIPS

21-Aug-1987
KMS1P-M-INDEX.A
REV A

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KMS1P-M-TT-01	A	28-May-86	433	Diagnostic failure (EVDHB)

KMS1P-M-TT-1

Field Service TECH TIP

digital™

Page 1 of 1

Category Systems

Rev A

Title DIAGNOSTIC FAILURE (EVDHB)

Option KMS1P-M

Cross Reference N/A

TECH TIP No. KMS1P-M-TT-01

Problem/Solution

PROBLEM:

KMS diagnostic EVDHB fails under diagnostic supervisor version 9.0 with the following message; "QIO CALL NOT ACCEPTED BY DRIVER".

CAUSE:

All current documentation says that the UAF parameter BYTLM must be at least 8204. Under the latest supervisor (9.0), this is not enough.

SOLUTION:

When running under Version 9.0 of the supervisor, set the BYTLM quota to at least 8364.

Approvals

Author MAURICE WILLIAMS	ESD&P TECH TIP Coordinator Bruce J. Conley	CSSE Maurice J. Williams MAURICE WILLIAMS
Author's Manager PHIL DUDZIAK		Field Service Product Safety
Release Date 23 May 1986		Revision A

FOR INTERNAL USE ONLY: This information is the property of Digital Equipment Corporation.
For more information on writing or approving TECH TIPs, see Administrative TECH TIP Number 2.

KMS1PM-TT-2

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

KU750

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

D-O-L

FCO FIELD CHANGE ORDER LOG **digital** **KU750**

DEC-O-LOG

G & H Microcode

LIBRARY TYPE

VAX

KU750-R0001 CODE: F

MAR 85 - PROBLEM: EMODH instruction does not back up the resistor used by the last Operand Specifier in the CPU register backup stack overflowed.

CORRECTION: Update your G & H microcode to run version 2 of the G & H microcode.

IN-PLANT EFFECTIVITY: NOV 84

FIELD EFFECTIVITY: Retrofit all KU750's to revision level "01".

QUICK CHECK: Run the KU750 Test procedure, msg. should indicate G & G Microcode version "2".

The DEC on-site labor charge will be the time required to install and test the FCO at the then current hourly rate.

FCO KIT ORDERING:

EQ-01337-01: FCO, PARTS

FA-04618-01: FCO only

Copyright © 1985 by Digital Equipment Corporation
Printed in U.S.A.

KU750-DOL-1

FCO'S

10-Nov-1986
KU750-INDEX.A
REV A

MICROMEDIA PUBLISHING

Field Change Order Index

FCO Number	FA REV	Rel. Date	SB#	Problem
-KU750---R001	A	20-Mar-85	373	EMODH instr doesn't back up resistor used by last Operand Specifier

KU750-FCO-1

digital

FIELD CHANGE ORDER

FA-04618-01

FCO KU750 R 0001

Level of Urgency (LOU)

PAGE 1 of 8

STATUS LOU	FCO EXPENSE RESPONSIBILITY WARRANTY	CONTRACT	PER CALL
Mandatory	DIGITAL		
Required			CUST
Specification			CUST
Improvement			CUST
Hardware Option	PURCHASEABLE OPTION		
Cosmetic	CUST	CUST	CUST

On-site FCO installation, by DEC, will be in accordance with both APPLICABILITY and the above FCO EXPENSE RESPONSIBILITY matrix.

ESTIMATED TIME TO INSTALL and TEST (on-site) (Travel time not included)

1 hr.

DECIMAL HOURS

APPLICABILITY

Retrofit all KU750's to Revision level "01".

QUICK CHECK (To determine if FCO has been installed)

Run KU750 Test Procedure, msg. should indicate G&G Microcode version "2".

SPECIAL TEST EQUIPMENT, TOOLS, or SUPPLIES (Not included in the Field Retrofit Kit)

None.

LAST PREVIOUS FCO's None.

RELATED OR PREREQUISITE FCO's / MCO's

11/750-R0005

FIELD INSTALLATION and TEST PROCEDURE

****

NOTE

Contact your Regional FCO Coordinator for ordering procedures.

****

PARTS AVAILABILITY DATE April 1985

LOGISTICS CODING 400 - 400 - 500

LOGISTICS REVIEW EM Duggan 20 MAR 85

QTY	PART NUMBER	DESCRIPTION
1	BE-T909A-ME	KU750-YG G&H Ucode & Loader Revision "A" or later

Order by This Number	Kit Contains FCO	Prints	Parts
EQ-01337-01	X		X
FA-04618-01	X		

Problem/Symptoms: EMODH instruction does not back up the register used by the last Operand Specifier in CPU register backup stack overflowed.

Corrections: Update your G&H microcode to run Version 2 of the G&H microcode.

APPROVED - Field Service Product Support

Paul J. Cormier

Paul Cormier

John Freudenberg

John Freudenberg

Library: Vax

FCO RELEASE DATE

20 March 1985

[illegible]

KU750 - FCO - 1-17

UPGRADE PROCEDURE
FOR
FCO KU750-R0001

NOTE

This is for Version 3.X or higher.

IN ORDER TO BRING THE SYSTEM TO REV 1, THE L0008-YB BOARD (EQ-1201-02) MUST BE INSTALLED.

1. Power up the System.

2. To update VMS in order to load GHFLOAT.BIN, perform the following steps:

   A. Boot up VMS.

   B. Log in under the system manager account.

   C. Set default to [SYSUPD].

   D. Install KU750KIT TU58 in CSA1:

   E. Type "@VMSINSTAL KU750020 CSA1:"

   The update command file will ask four questions:

   1) "Do you want to print a copy of the Installation Notes [YES]?"

      If you answer YES, or just type carriage return, then the installation notes will be printed on SYS$PRINT.

   2) "Do you want a copy of the Installation Notes in SYS$MANAGER [NO]?"

      If you would like to save a copy of the installation notes in SYS$MANAGER, answer YES.

   3) "Do you want files replaced by this installation purged [YES]?"

      If you answer YES, or just type carriage return, then any files replaced by this installation will be purged.

4) "If you have battery backup, do you want powerfail recovery?"

This question decides how a powerfail is handled. If a powerfail occurs and you have battery backup, WCS will not be reloaded unless the KU750 device driver is included with the command file that defines that device driver. If you answer "yes" to this question, the device driver (KU750DRV) will be included with the KU loader utility (KU750UTL).

If you answer "no," the driver will not be included with the utility.

F. VMSINSTAL CHECK

After you have answered the questions, the update command file will put the files in the proper locations. When the update command file is complete, do the following checks:

1) Make sure these files are in SYS$SYSROOT:[SYSEXE]:

GHFLOAT.BIN
GHOFF.BIN
KU750UTL.EXE
KU750TST.EXE
KU750DRV.EXE (only if answered "yes" to question #4.)

2) Make sure these files are in SYS$SYSROOT:[SYSMGR]:

KU750.COM
KU750OFF.COM
KU750INS.MEM (only if answered "yes" to question #2.)

3) Make sure this file is in SYS$SYSROOT:[SYSTEST]:

KU750IPC.COM

3. Modifications to Site Specific Startup procedure.

Your site-specific startup procedure, normally SYS$MANAGER:SYSTARTUP.COM, needs to be edited to include one of the following (as close to the beginning as possible):

If you answered "YES" to the question on Battery Backup and Power Fail Recovery, include the following lines:

```
@SYS$MANAGER:KU750 RECOVER
@SYS$TEST:KU750IPC
```

If you answered NO to the question on Battery Backup and Power Fail Recovery, include the following lines:

```
@SYS$MANAGER:KU750
@SYS$TEST:KU750IPC
```

Please note that the second command should always be included for systems without battery backup.

Note also that the first command should be included for systems equipped with battery backup; if this command is missing, G&H Floating microcode will not be reloaded on recovery from a powerfail condition.

4. Installation is complete. Reboot the system to load KU750 with G&H microcode.

5. To verify that G&H microcode has been successfully loaded, type:

```
@SYS$TEST:KU750IPC
```

This procedure will verify that G&H microcode has been successfully loaded by testing all G&H Floating instructions.

A. If the test was successful, the following message will be printed out:

```
%WCSMSG-I-MICVER, GH microcode version x loaded successfully
```

B. If the test was unsuccessful, the following error message will be printed out:

```
%WCSMSG-E-INSTERR, GH instruction errors detected
%NONAME-W-NOMSG, Message number 00000000
```

> **NOTE**
>
> If you have this or any kind of failure while running this test, make certain that WCS was loaded in the STARTUP command procedure.

6. If, for some reason, it is desired to disable G&H Floating operation, type the following:

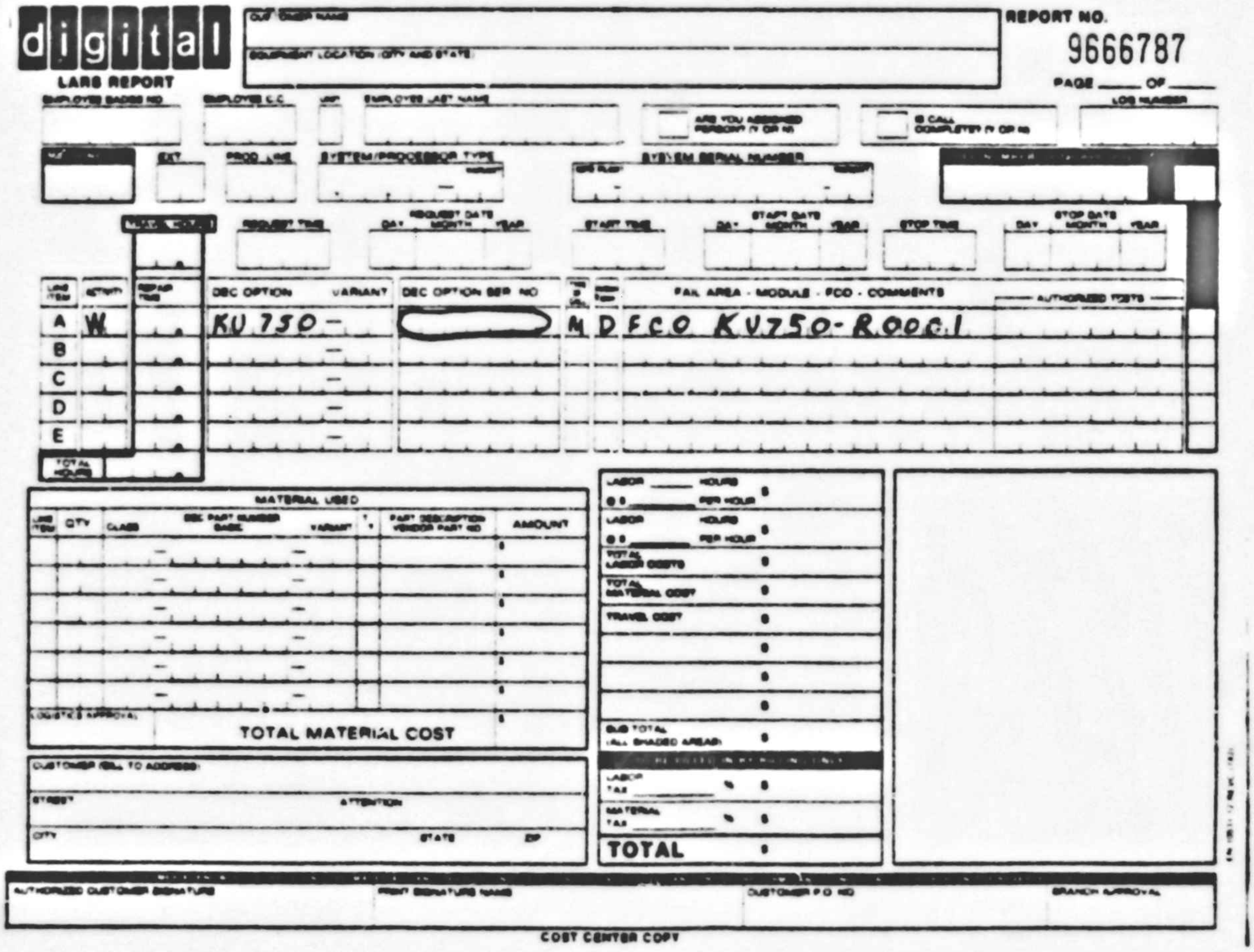
```
@SYS$MANAGER:KU750OFF
```

7. Update the Site Management Guide to reflect this FCO.

8. Report this FCO activity on the LARS form in the "Fail Area/Module/FCO/Comments" column as indicated in the attached LARS form samples.

SAMPLE LARS FORM

FOR CONTRACT AND WARRANTY CUSTOMERS
***** U.S AND G.I.A. ONLY *****



digital

LARS REPORT

REPORT NO. 9666787

PAGE ____ OF ____

EMPLOYEE LAST NAME

LOG NUMBER

EXT

PROD LINE

SYSTEM/PROCESSOR TYPE

SYSTEM SERIAL NUMBER

REQUEST TIME

REQUEST DATE DAY MONTH YEAR

START TIME

START DATE DAY MONTH YEAR

STOP TIME

STOP DATE DAY MONTH YEAR

LINE ITEM	ACTIVITY	REPAIR TIME	DEC OPTION	VARIANT	DEC OPTION SER NO			FAIL AREA - MODULE - FCO - COMMENTS	AUTHORIZED TOTS
A	W		KU750			M	D	FCO KU750-R0001	
B									
C									
D									
E									
TOTAL HOURS									

MATERIAL USED

LINE ITEM	QTY	CLASS	DEC PART NUMBER BASE	VARIANT		PART DESCRIPTION VENDOR PART NO	AMOUNT
							$
							$
							$
							$
							$
							$

TOTAL MATERIAL COST $

LABOR ____ HOURS @ $ ____ PER HOUR $

LABOR ____ HOURS @ $ ____ PER HOUR $

TOTAL LABOR COSTS $

TOTAL MATERIAL COST $

TRAVEL COST $

SUB TOTAL (ALL SHADED AREAS) $

LABOR TAX % $

MATERIAL TAX % $

TOTAL $

CUSTOMER (BILL TO ADDRESS)

STREET

ATTENTION

CITY

STATE

ZIP

AUTHORIZED CUSTOMER SIGNATURE

PRINT SIGNATURE NAME

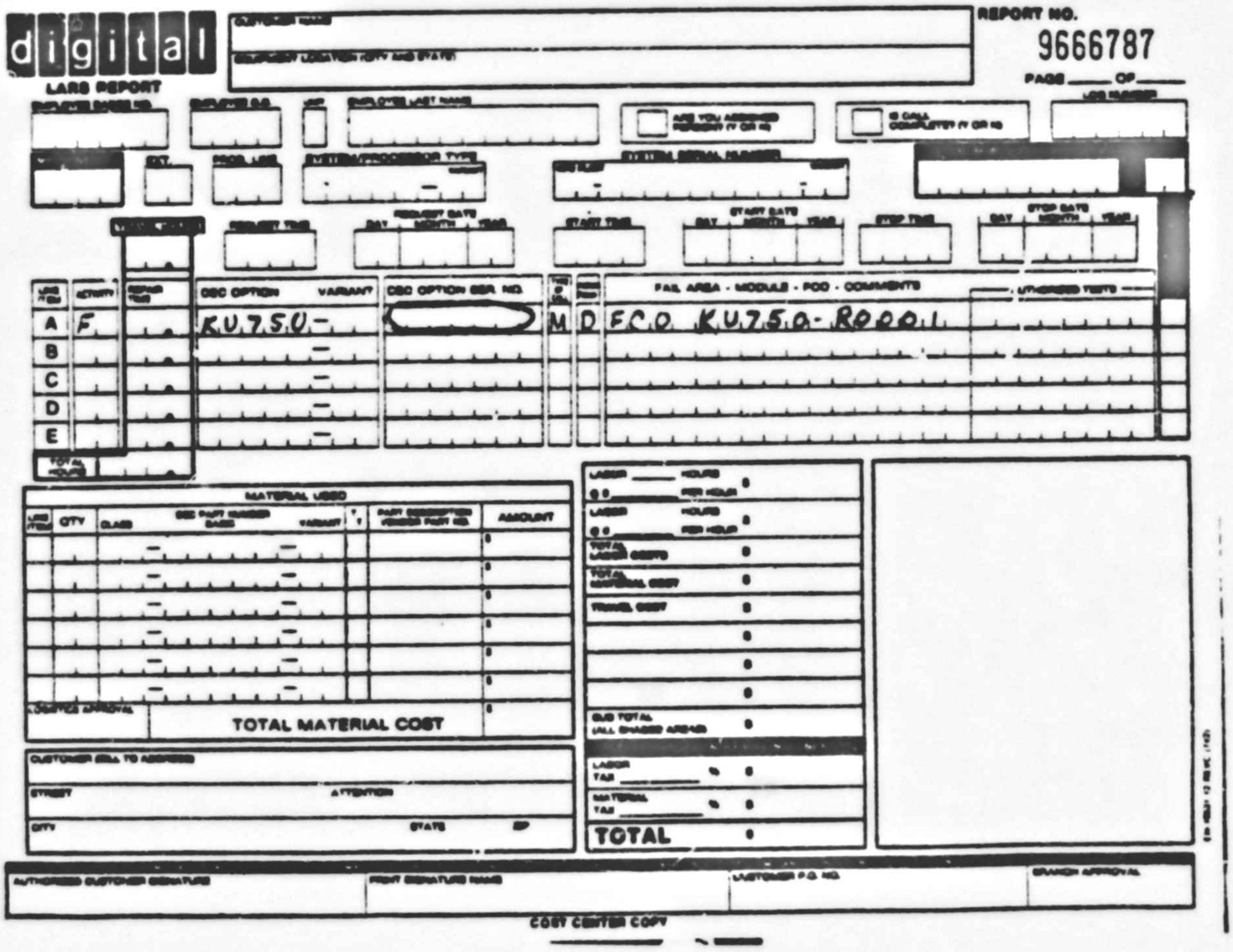
CUSTOMER P.O. NO

BRANCH APPROVAL

COST CENTER COPY

SAMPLE LARS FORM

FOR PER CALL CUSTOMERS
*** U.S., G.I.A. AND EUROPE ***



digital

LARS REPORT

REPORT NO.

9666787

PAGE ____ OF ____

			DEC OPTION / VARIANT	DEC OPTION SER. NO.			FAIL AREA - MODULE - FCO - COMMENTS
A	F		KU750-		M	D	FCO KU750-R0001
B							
C							
D							
E							

MATERIAL USED

	QTY	CLASS		VARIANT		AMOUNT

TOTAL MATERIAL COST

STREET ATTENTION

CITY STATE ZIP

LABOR ____ HOURS

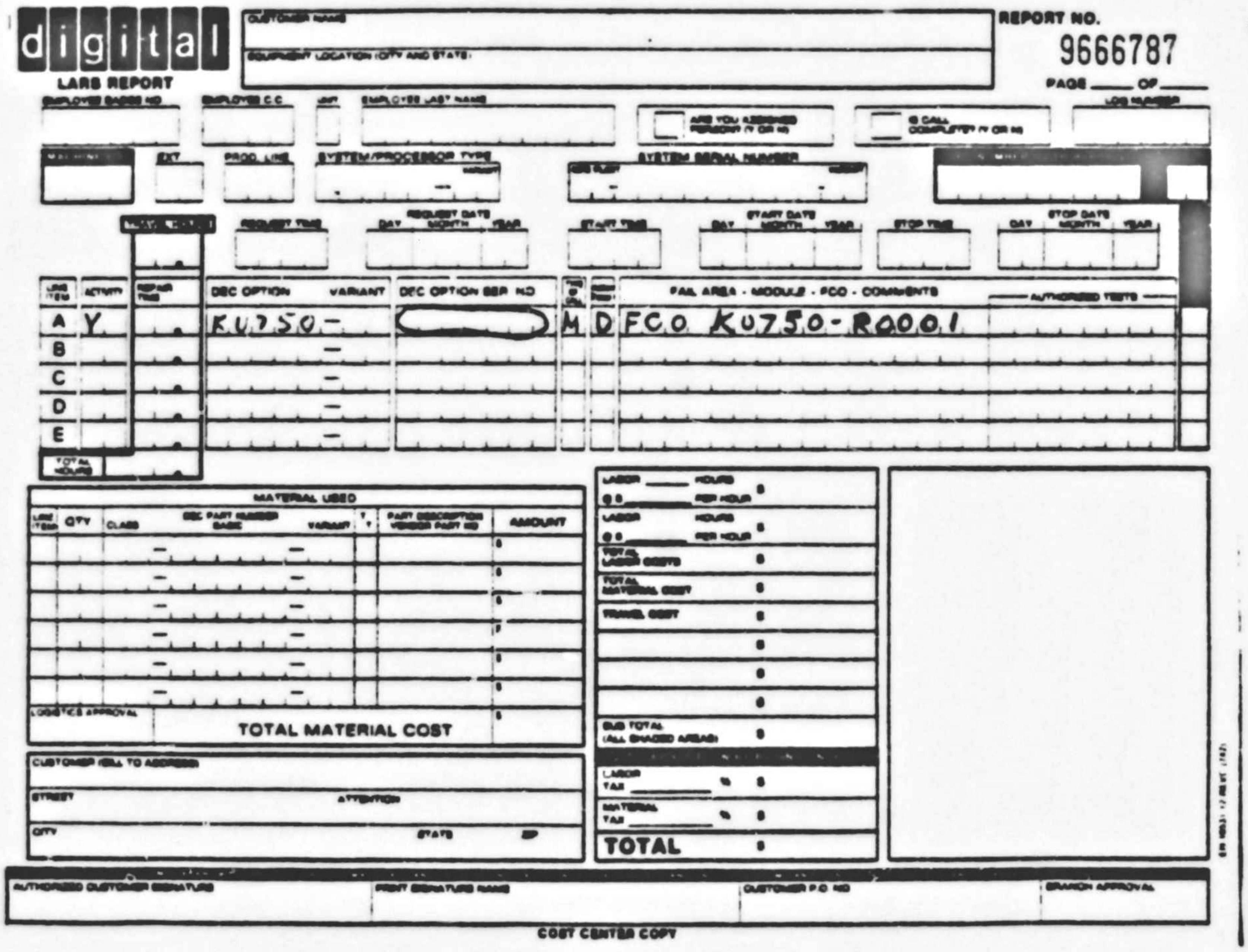
@ $ ____ PER HOUR

TOTAL

COST CENTER COPY

SAMPLE LARS FORM

FOR CONTRACT AND WARRANTY CUSTOMERS
***** EUROPE ONLY *****



digital

LARS REPORT

CUSTOMER NAME

EQUIPMENT LOCATION (CITY AND STATE)

REPORT NO. 9666787

PAGE ____ OF ____

EMPLOYEE BADGE NO

EMPLOYEE C.C

EMPLOYEE LAST NAME

ARE YOU ASSIGNED PERSON? (Y OR N)

IS CALL COMPLETE? (Y OR N)

LOG NUMBER

EXT

PROD. LINE

SYSTEM/PROCESSOR TYPE

SYSTEM SERIAL NUMBER

REQUEST TIME

REQUEST DATE DAY MONTH YEAR

START TIME

START DATE DAY MONTH YEAR

STOP TIME

STOP DATE DAY MONTH YEAR

LINE ITEM	ACTIVITY	REPAIR TIME	DEC OPTION	VARIANT	DEC OPTION SER NO			FAIL AREA - MODULE - FCO - COMMENTS	AUTHORIZED TESTS
A	Y		KU750	–		M	D	FCO KU750-R0001	
B				–					
C				–					
D				–					
E				–					
TOTAL HOURS									

MATERIAL USED

QTY

CLASS

DEC PART NUMBER

VARIANT

PART DESCRIPTION

AMOUNT

TOTAL MATERIAL COST

CUSTOMER (BILL TO ADDRESS)

STREET

ATTENTION

CITY

STATE

ZIP

LABOR ____ HOURS

@ $ ____ PER HOUR $

TOTAL LABOR COSTS $

TOTAL MATERIAL COST $

TRAVEL COST $

SUB TOTAL (ALL SHADED AREAS) $

LABOR TAX ____ % $

MATERIAL TAX ____ % $

TOTAL $

AUTHORIZED CUSTOMER SIGNATURE

PRINT SIGNATURE NAME

CUSTOMER P.O. NO

BRANCH APPROVAL

COST CENTER COPY

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxx
xxxxxxxxxxxxx
xxxxxxxxxxx
xxxxxxxxx
xxxxxxx
xxxxx
xxx
x
```

KU780

```
                                                  x
                                                xxx
                                              xxxxx
                                            xxxxxxx
                                          xxxxxxxxx
                                        xxxxxxxxxxx
                                      xxxxxxxxxxxxx
                                    xxxxxxxxxxxxxxx
                                  xxxxxxxxxxxxxxxxx
                                xxxxxxxxxxxxxxxxxxx
                              xxxxxxxxxxxxxxxxxxxxx
                            xxxxxxxxxxxxxxxxxxxxxxx
                          xxxxxxxxxxxxxxxxxxxxxxxxx
                        xxxxxxxxxxxxxxxxxxxxxxxxxxx
                      xxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
              xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
            xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
          xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
        xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
      xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
    xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

TECH. TIPS

21-Aug-1987
KU780-INDEX.A
REV A

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KU780--TT-01	A	8-Mar-83		KU780-A instal procedure

KU780-TT-1

digital	**FIELD SERVICE TECH TIP** ☐ 12 Bit ☐ 16 Bit ☐ 18 Bit ☒ 32 Bit ☐ 36 Bit	**Option Designator** KU780 **Category** SYSTEMS
Title KU780-A INSTALLATION PROCEDURE		**Tech Tip No.** KU780-TT-1
Processor Applicability 11/780	**Cross Reference** N/A	**Tech Tip Rev** A **Page** 1 of 1
Author GREG DOLAN	**Mgr./Supv. Approval** ED CYRULIK EJC	
Location CONNECTICUT DISTRICT SUPPORT	**Mail Stop** MERIDEN/MDO	**Date** 12 FEB 83
CSSE Approval BILL FREEMAN Bill Freeman		**Date** FEBRUARY 1983
PSG Approval MAX WEINFUSS		**Date** 8 MAR 83

STEP 4 OF THE KU780 INSTALLATION PROCEDURE ENGINEERING SPECIFICATION (A-SP-KU780-0-0), DATED 10-FEB-82, STATES:

> "CONNECT THE BACKPANEL JUMPERS FOR THE OPTIONAL WRITEABLE CONTROL STORE. (NORMALLY THE 7TH 2K MEMORY BANK.)"

THE 7TH 2K MEMORY BANK IS NOT IN ADDRESSABLE CS SPACE (12-14K). STEP 4 SHOULD READ:

> "CONNECT THE BACKPANEL JUMPERS FOR THE OPTIONAL WRITEABLE CONTROL STORE. (NORMALLY THE 6K STARTING BANK ADDRESS.)'

THE KU780-A JUMPER CONFIGURATION FOR A 6K STARTING BANK ADDRESS IS:

J11-X, Z, DD, FF	IN
J11-BB	OUT

THESE JUMPERS SELECT THE STARTING ADDRESS OF OPTIONAL WCS FOR SLOT 18.

FOR INTERNAL USE ONLY: This information is property of Digital Equipment Corporation
For more information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

Page Number 1	**Page Revision** A	**Publication Date** MARCH 1983

KU 780- TT- 2

KW11-K

TECH. TIPS

29-Dec-1987
KW11-K-INDEX.B
REV B

MICROMEDIA PUBLISHING

Tech Tip Index

Tech Tip Number	REV	Rel. Date	SB#	Title
-KW11-K-TT-01	0	1-Mar-77		Schmitt trigger tests
-KW11-K-TT-02	0	1-Nov-77		Incorr address recog of KW11-K
-KW11-K-TT-03	0	30-Mar-78		Schmitt trig prob/cable
-KW11-K-TT-04	B	30-Mar-78		KW11-K w/MOS mem (DZKWK-A)
-KW11-K-TT-05	0	29-Aug-78		KW11-K schmitt trigger
-KW11-K-TT-06	0	21-Sep-79		KW11-K diagnostic on 11/60
-KW11-K-TT-07	A	14-Feb-80		KW11-K clock

KW11-K-TT-1

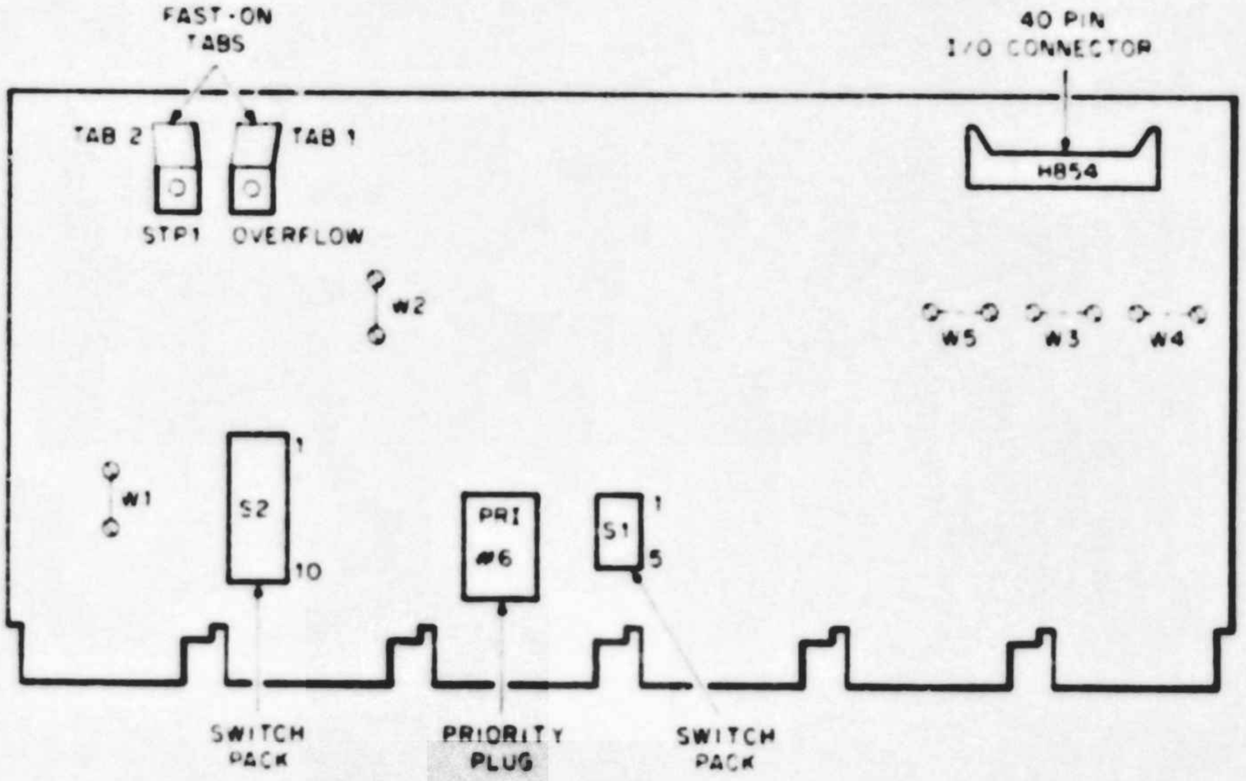
digital	FIELD SERVICE TECHNICAL MANUAL				Option or Designator KW11-K
	12 Bit ☐	16 Bit ☒	18 Bit ☐	36 Bit ☐	PROCESSOR

Title	SCHMITT TRIGGER TESTS			Tech Tip Number	KW11-K-TT-1
Author	BARRY SCHOFER	F S Office MAYNARD	Date 3/77	Revision	0
Processor Applicability All 11		Mgr /Sup M. WAGNER	Date 3/77	Cross Reference	
		Approval	Date		

TO RUN THE EXTERNAL I/O SIGNAL TESTS IN THE KW11-K DIAGNOSTIC, (MAINDEC-11-DZKWK) JUMPERS W3, W4, AND W5 MUST BE INSTALLED. THESE JUMPERS WILL MAKE THE SCHMITT TRIGGER INPUTS TTL COMPATIBLE TO THE SOURCE SIGNALS. FAILURE TO INSTALL THE JUMPERS WILL RESULT IN INTERMITTENT ERRORS BEING DETECTED BY THE DIAGNOSTIC.

NOTE: 1) THRESHOLD & SLOPE INPUTS TO THE SCHMITT TRIGGER UNDER TEST CAN BE LEFT FLOATING.

2) IT IS NOT NECESSARY TO HAVE JUMPER W2 INSTALLED SPECIFICALLY FOR THE EXTERNAL I/O TESTS, HOWEVER INSTALLATION WILL BE NECESSARY FOR THE KW11-K LOGIC TEST.


FAST-ON TABS
40 PIN I/O CONNECTOR
TAB 2
TAB 1
H854
STP1
OVERFLOW
W2
W5
W3
W4
W1
S2
1
10
PRI #6
S1
1
5
SWITCH PACK
PRIORITY PLUG
SWITCH PACK

DEC CONFIDENTIAL
This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Organization only.

Page 1	Page Revision 0	Publication Date MAR 1977

PRINTED IN U.S.A.

EN 1189C 12 H277 (79Y)

KW11-K-TT-2

Title INCORRECT ADDRESS RECOGNITION OF KW11-K			Tech Tip Number KW11K-TT-2
Author WAYNE KATAISTO	F.S. Office MAYNARD	Date 11/77	Revision 0
Processor Applicability	Mgr./Sup. MERLE WAGNER	Date 11/77	Cross Reference
All | 11's | | | | |	Approval:	Date	

THE KW11-K (M7025 ETCH REV. A) MAY HAVE HAD M7025 ECO #002 INCORRECTLY INSTALLED. THE ETCH BETWEEN PINS 8 AND 9 ON E72 (UNDER) SHOULD HAVE BEEN CUT. FAILURE TO HAVE THE ETCH CUT RESULTS IN UNIBUS DUAL ADDRESS PROBLEMS WHEN AN AA11K IS INSTALLED IN THE SAME SYSTEM. PROBLEM WILL BE DETECTED WHEN RUNNING MAINDEC DZAAC (AA11K DIAGNOSTIC) AUTO LOGIC TEST. THE PROGRAM PRINTOUT CONSISTS OF:

```
PROGRAM DETECTED 1 (8) AA11-K(S) - NORMAL OUTPUT

DAC 2 REGISTER IN ERROR

ERRPC        IBASE        EXPECT       BAD
003212       170404       001000       003000

DAC 3 REGISTER IN ERROR

ERRPC        IBASE        EXPECT       BAD
003356       170426       001000       003000
```

Title	SCHMITT TRIGGER PROBLEMS WITH BC08R CABLE WHILE RUNNING DIAGNOSTICS.			Tech Tip Number KW11K-TT-3
Author JOHN KWOLEK	F.S. Office MAYNARD		Date 3.30.78	Revision 0
Processor Applicability All |11| | | | | |	Mgr./Sup. M. WAGNER		Date 3.30.78	Cross Reference
	Approval:		Date	

1) COMPARATORS ARE USED AT THE SCHMITT TRIGGER INPUTS. WITH NO SIGNALS PRESENT, BOTH INPUTS ARE TIED TO BASICALLY THE SAME VOLTAGE REFERENCE.

2) IF THE LOGIC TEST (DZKWK) IS RUN, ERRORS WILL SHOW UP IF A BC08R CABLE IS CONNECTED TO THE BERG CONNECTOR. THIS IS DUE TO THE FACT THAT THE SCHMITT TRIGGER WILL FIRE WHEN NOT EXPECTED.

3) THE SOLUTION IS:

   A) NOT CONNECT THE CABLE WHILE RUNNING THE DIAGNOSTICS

   B) SHORT THE SCHMITT TRIGGER INPUTS TO GROUND.

KW11-K-TT-4

Title KW11K WITH MOS MEMORY. (DZKWK-A)			Tech Tip Number KW11K-TT-4
Author KATAISTO/KWOLEK	F.S. Office MAYNARD	Date 3.30.78	Revision B
Processor Applicability All 11	Mgr./Sup. DON HERBENER	Date 3/30/78	Cross Reference
	Approval:	Date	

WHEN RUNNING THE KW11-K DIAGNOSTIC (DZKWK), ERRORS ON THE A&B CLOCK COUNTS (AT 1M HZ REPEATABILITY) OCCUR BECAUSE OF THE MOS MEMORY REFRESH CYCLE, THE KW11-K DIAGNOSTIC SHOULD BE PATCHED AT TEST 173 AND TEST 204 WHERE THE COMPARISON IS MADE ON THE COUNTS. NORMALLY A VARIANCE OF 2 IS ALLOWED. WITH MOS MEMORY THIS VARIANCE SHOULD BE CHANGED TO 5.

LOCATION	WAS	SHOULD BE
17610	2	5
21716	2	5

KW11-K-TT-5

Title	KW11-K Schmitt Trigger			Tech Tip Number	KW11K-TT- 5
Author	Wayne Kataisto	F.S. Office	Maynard	Date	August 78	Revision	0
Processor Applicability		Mgr./Sup.	Dave Earley	Date	August 78	Cross Reference	
All	11s	Approval:		Date	31 Aug 78		

To use the Schmitt trigger 1 input for interrupts on an external event (not to count events), Bit 00 of the Status A register has to be set, Bits 01, 02, 03 of the Status A register have to be cleared. Bit 00 corresponds to Enable Counter A, Bits 01, 02, 03 are the rate select. If this is not done, interrupts can be missed due to presetting of the counter.

KW11-K-TT-6

Title KW11-K DIAGNOSTIC ON 11/60			Tech Tip Number KW11-K-TT-6
Author JIM WERNER	F.S. Office MAYNARD	Date 9.12.79	Revision 0
Processor Applicabilty	Mgr./Sup. L. GOELZ	Date 9.21.79	Cross Reference
All 11/60'S	Approval:	Date	PDP11/60-TT-18

THIS TECH TIP IS FOR CROSS REFERENCE ONLY

KW11-K-TT-7

digital

FIELD SERVICE TECHNICAL MANUAL

12 Bit ☐ 16 Bit ☒ 18 Bit ☐ 36 Bit ☐

Option or Designator KW11-K

Title KW11-K CLOCK

Tech Tip Number KW11-K-TT-7

Author Rich Hynes

F.S. Office Marlboro

Date 28 Jan 80

Revision A

Processor Applicability

All 11

Mgr./Sup. JOHN YASKO

Date 14 Feb 80

Approval:

Date [illegible] 5.80

Cross Reference

It has been discovered that the base frequency of the clock oscillator is out of the tolerance range of the User's Manual and specifications. FCO #M7025-S007 corrects this with the installation of a new 20MHZ oscillator packs on the M7025 etch REV "B".

The following procedure will correct the problem on etch REV "A" modules.

1. Remove Crystal Y1
2. Remove IC Chip E1 (745124).
3. Cut etch side 1, between E1 pin 7 and E3 pin 11.
4. Cut etch side 2, between E1 pin 16 and E1 pin 1. (See Fig. 2)
5. Add wire between E1 pin 10 and E3 pin 11.
6. Add wire between E1 pin 9 and E1 pin 7.
7. Insert 20 MHZ oscillator pack in E1 chip.

Space, utilizing pins 1, 7, 10 and 16 only. (existing pins 8 & 9 are unused) solder in oscillator pack and wires. Ensure that the metal case does not short any connection on unused holes in the module.

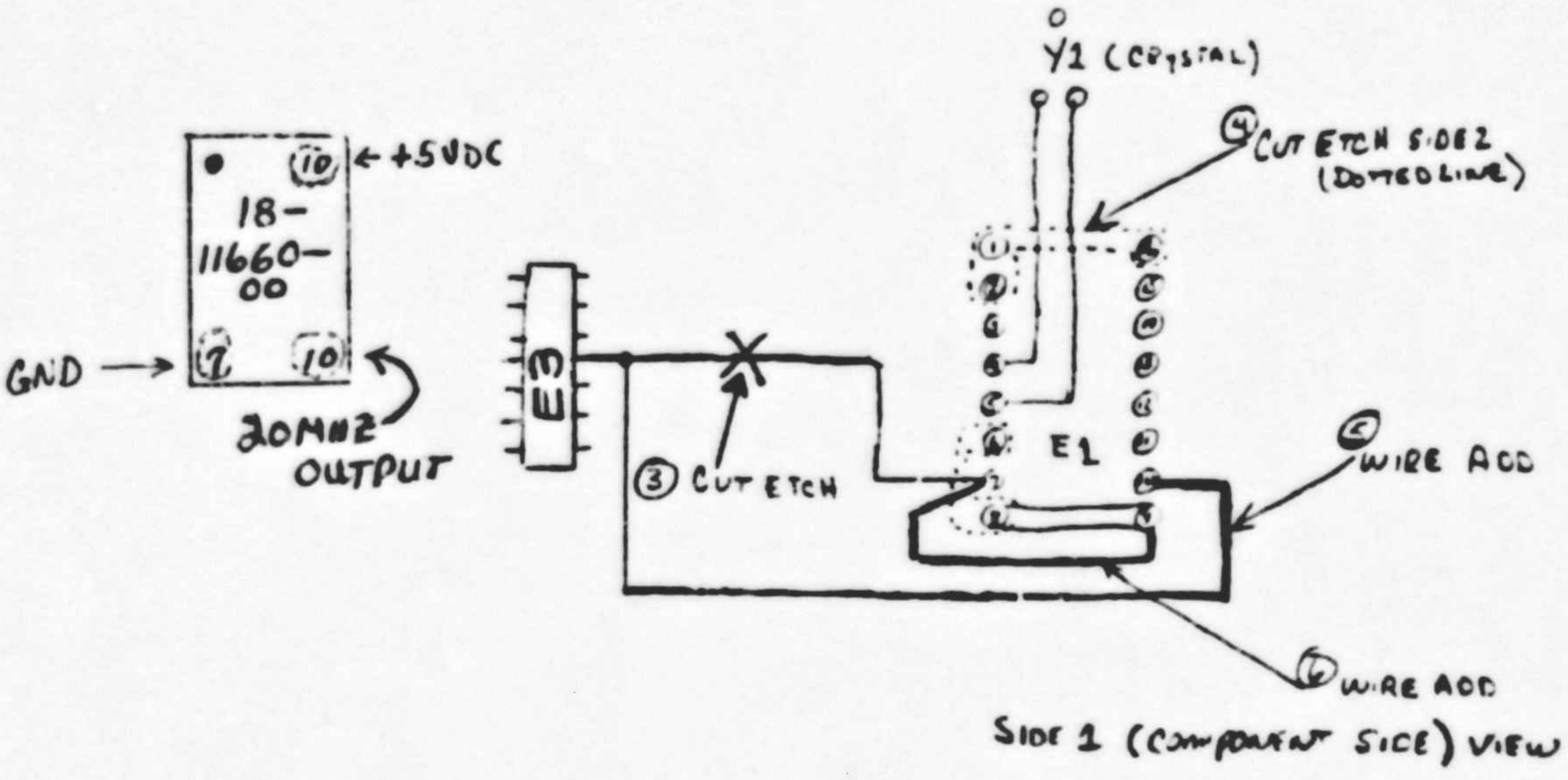
8. Replace module in the system and verify oscillator frequency with a counter to be 20MHZ ±.01%.

DEC CONFIDENTIAL
This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Organization only.
For information on writing or approving a Tech Tip, see Administration Tech Tip Number 2.

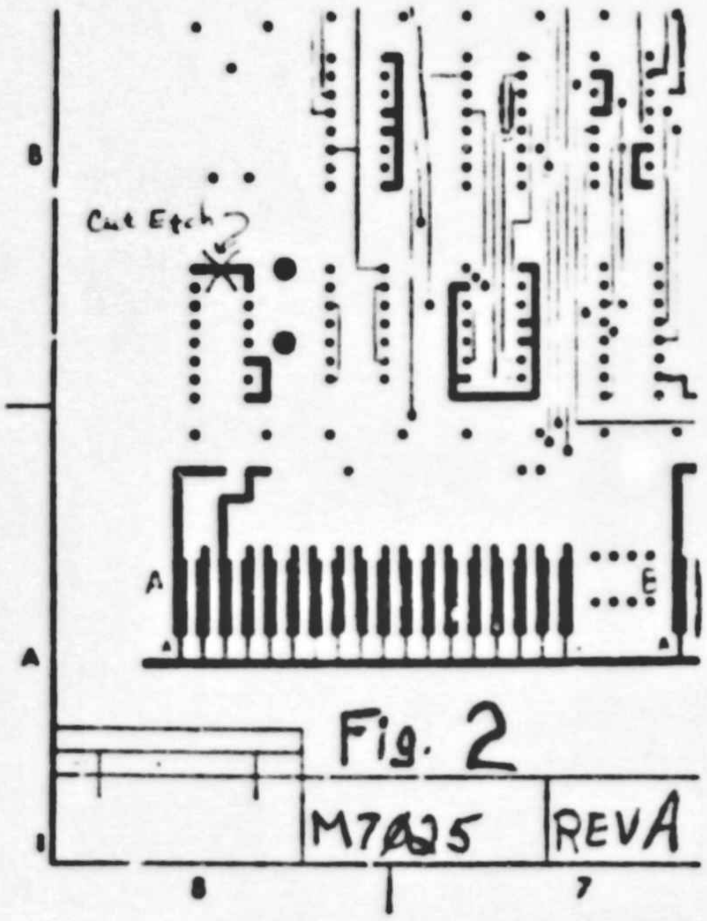
KW11K-TT-8

Title	KW11-K CLOCK			Tech Tip Number	KW11-K-TT-7
Author	Rich Hynes	F.S. Office	Marlboro	Date 28 Jan. 80	Revision 0
Processor Applicability All		Mgr./Sup.	JOHN YASKO	Date 14 Feb 80	Cross Reference
		Approval		Date Feb. 80	NONE

KW11K Clock

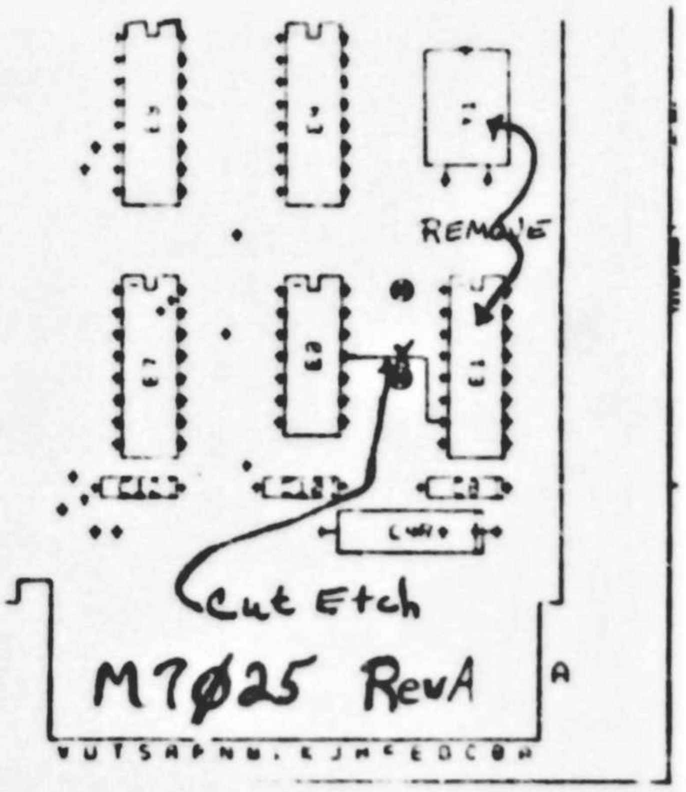


0
Y1 (CRYSTAL)
④ CUT ETCH SIDE 2 (DOTTED LINE)
10
← +5VDC
18-11660-00
GND →
7
10
20MHZ OUTPUT
E3
③ CUT ETCH
E1
⑤ WIRE ADD
⑥ WIRE ADD
SIDE 1 (COMPONENT SIDE) VIEW



B
Cut Etch
A
A
E
M7025 REVA
8
7

Fig. 2



REMOVE
Cut Etch
M7025 RevA
A
V U T S R P N M L K J H F E D C B A

DEC CONFIDENTIAL This document is proprietary to Digital Equipment Corporation and is intended for use by its Field Service Organization only.

KW11-K-TT-9